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ABSTRACT

This collection of twenty-six papers is the fourth resulting from the Polish-English Contrastive Project. The overall purpose of the project is to prepare a Polish-English contrastive grammar and to develop pedagogical materials. The basic model used for research is the transformational generative one. Among the papers on phonology, topics such as stress, intonation, distinctive features, and consonant clusters are discussed, as well as issues in contrastive phonology and phonetics. Clitics, nominals, ellipsis, and comparative constructions are among the topics discussed in the papers on morphology and syntax, while modal auxiliaries, verb complementation, transitive verbs, and the derivation of infinitives are the focus of papers concerned directly with verb syntax and morphology. Syntactic ambiguity is discussed as it relates to teaching written English to Polish students, and exercises for intermediate and advanced Polish learners of English are provided. A bibliography of English-Polish contrastive studies in Poland follows the papers. (CLK)

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THE POLISH-ENGLISH CONTRASTIVE PROJECT

PAPERS AND STUDIES IN CONTRASTIVE LINGUISTICS

VOLUME FOUR

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A NOTE ON STRESS ASSIGNMENT IN POLISH NOUN PHRASES

ROLAND SUSSEX

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In a recent paper on the order of attributive adjectives in Polish (Sussex 1974) I proposed that the placing of the adjective in pre- or post-nominal position, and the order of attributive adjectives, are basically similar in nature to the rules operating in pre-modifying languages like English, German and Russian. These rules employ a syntactic-semantic subclassification of adjectives, based on their prenominal slots:

(1) $_{NP}(A_x \ldots A_y + N)_{NP}$
where x and y are slot indices, and $x > y$

Polish differs from pre-nominally modifying languages in that adjectives of certain subclasses usually follow the noun — notably most of the "relational" (*otnositel'nye*) adjectives of traditional Russian grammars:

(2a) maszyna elektryczna
(2b) gramatyka opisowa
(2c) pytanie ideologiczne

cf.

(3a) dobra maszyna
(3b) pełna gramatyka
(3c) trudne pytanie

The remainder of the relational adjectives and qualitative adjectives (*kačestvennye prilagatel'nye*) may follow the noun in the contrastive construction

(4a) dziennik dzisiejszy
(4b) obywatel tutejszy

and contrast also accompanies the pre-nominal placing of normally post-nominal adjectives:

(5a) elektryczna maszyna
(5b) opisowa gramatyka
(5c) ideologiczne pytanie

I assumed, in other words, that Polish Noun Phrases consisting of an adjective and a noun obey a rule similar to the Chomsky & Halle Nuclear Stress Rule (1968), which assigns rightmost stress within the phrase under non-emphatic conditions. In principle, any constituent of such a Noun Phrase may be contrastively stressed. When the adjective and noun are normally ordered, in the sense defined above, the ${}_{NP}(2-1)$[1] stress pattern is non-emphatic. When the adjective and noun are abnormally ordered, the stress pattern NP(2–1) is itself emphatic, and the emphasis can only be reversed by strong emphasis on the first constituent, which we may describe as ${}_{NP}(1+\ -1)$, the "+" indicating extra stress (see (4) and (5)).

Thanks to Wayles Browne, who has brought to my attention Maciej Pakosz's paper "Stress contours of compound words and phrases in Polish and in English", I now believe that the above description, although still fundamentally correct, is an oversimplification. Pakosz outlines three accentual classes of word+word combinations:

A. Word+word=word group, stressed 2–1
e.g., nowozbudowany, roboczodniówka
nóż żelazny
B. Word+word=word group, stressed 1–2
e.g., gazetka ścienna, nóż kuchenny
C. Word+word=new word with different stress from its components
e.g., Wielkanoc
samochód

It is examples like *nóż kuchenny* in the "B" group which show the fallacy of my earlier analysis in accepting the "A" type pattern for non-emphatic Noun Phrases, and the "B" type for emphatic ones. So why is *nóż kuchenny* stressed ${}_{NP}(1-2)$?

There is, to begin with, nothing intrinsically special about *nóż* that attracts stress, nor about *kuchenny* that rejects it: compare

(6a) nóż żelazny
(6b) okno kuchenne

---

[1] I shall use "1" and "2" informally to refer to major and minor stress; capitals in the text indicate major stress. Although certainly not delicate enough for larger syntactic contexts, this arrangement is adequate for our present purposes.

both of which are stressed orthodoxly $_{NP}$(2–1). There must, then, be something in the collocation of *nóż* and *kuchenny* which causes the stress to shift, just as there must be "something between" the nouns and adjectives in the following sample of 1–2 stressed N+ADJ examples:

(7) afisz sklepowy
brama klasztorna
dziennik polski
gazeta niedzielna
panna sklepowa
papier toaletowy
płyta gramofonowa
podręcznik fachowy
ropa naftowa
rura samochodowa
rura wydechowa
statek parowy
stróż nocny
sieć rybacka
koło zapasowe
młyn wodny
mundur wojskowy
odznaka harcerska
siła napędowa
sztab wojskowy
ucho dębowe
Unia Lubelska
widelec kuchenny
wyż demograficzny
zakład fryzjerski
zawody piłkarskie
zegar ścienny

This list is puzzling, because it is always possible to replace the noun or the adjective in these phrases with other nouns and adjectives which give a normal 2–1 stress pattern. The clue to the puzzle, however, cannot be phonological in nature. Not only is there no correlation of segment sequences and stress patterns; but there is also no correlation between stress and length. Considering the influence of French syntax on Polish, especially during the eighteenth and nineteenth centuries, it might not surprise us to find some reflex of the situation in French, where a monosyllabic noun precedes a polysyllabic adjective:

(8a) un bref entretien
(8b) ? un entretien bref
(9a) un entretien ennuyeux
(9b) un ennuyeux entretien (stylistically marked)

But this will not do for Polish, as the above examples show. We must therefore turn to syntactic and semantic factors for a possible explanation.

One line of approach is to describe the 1–2 structures as single words or as referring to a single or unique object, or objects of a "special type". Such semantic definitions are notoriously fraught with difficulties. Why, it may reasonably be asked, does a *nóż kuchenny* (1–2) qualify as an object of a "special type", whereas a *książka kuchenna* (2–1) apparently does not? There is, however, some help to be had from place names, especially the names of towns, which do clearly refer to unique objects. Thus we have

(10) Gorzów Wielkopolski
Ostrów Wielkopolski
Gostyń Poznański

with the 1–2 pattern. Indeed, the only situation in which 2–1 can occur is when there is a second (etc.) Gorzów, Ostrów or Gostyń. In this case the contrastive nature of the stress is clear. A good example is a pair of villages in Poznańskie called Lutol Suchy and Lutol Mokry, both with 2–1 stress patterns. Again, the Kraków Wawel is unique, in both name and nature. If it were not usually referred to as the Zamek Krakowski (2–1) — there being many castles in Poland — it would be called the Wawel Krakowski (1–2). This general analysis is borne out by the fact that a speaker may, if he believes that there is only one Gorzów (etc.), reasonably respond to a 2–1 pattern: "Oh, but I thought there was only one". Note, however, that this 2–1 contrastive pattern does not apply to N+N sequences, even when the N+N designates a unique object like a football team: thus Górnik Zabrze and the prewar Ruch Katowice (2–1). English, of course, right-stresses all place names, except when it is necessary to avoid a possible confusion: the adjacent villages Over Wallop, Middle Wallop and Nether Wallop in Hampshire, for instance, are stressed 1–2.

This deals satisfactorily with unique referents like towns — and, for that matter, with unique events like the Unia Lubelska. It does not deal with kitchen knives, which are not unique. We can, I think, profitably compare the situation in Polish with that in English, where some compound and complex expressions function as single phonological words:

(11) KITCHEN knife
ARMchair
WHEELbarrow
CLOTHES brush
TABLE leg
STEERING wheel
GRAVEstone
FIREguard

Note that some of these examples can be stressed as two phonological words, with a change of meaning:

(12) WHEEL BARROW: a barrow for a wheel
GRAVE STONE: a sad stone; a stone on a grave
STEERING WHEEL: wheel which steers (not necessarily a STEERING wheel).
FIRE GUARD: a man who guards (for/the) fires, etc.

What, then, happens to the 1–2 N+ADJ Polish sequences when we switch the stress pattern? As I have shown, the emphatic reading is available:

(13) zegar ŚCIENNY—i.e., not a table clock

but there is also a non-emphatic reading which reflects a new semantic relationship between the adjective and the noun, and one which is on the lines of "normal" noun-adjective collocations. Under this interpretation, the 2–1 pattern contrasts semantically with 1–2 pattern in the following way:

1–2: a type of clock whose shape, size and function are fixed by convention and general usage as belonging to this object; it can be so called whether or not it is actually hanging on a wall.

2–1: a clock of any type which is hung on the wall and therefore functions—by virtue of its being on the wall—as a 1–2 *zegar ścienny*, although its shape, size and so on may be different; when no longer hanging on the wall, it ceases to qualify for the attribute *ścienny*.

Similar arguments can be applied to many, though not all, of the examples of 1–2 stress contours listed in (7). A 1–2 *stróż nocny*, for example, is so called and accented whether you speak to him on the job or at midday; but a man working part-time at this job could be stressed 2–1 or 1–2; when he ceases to work, the 2–1 option lapses.

This parallelism of phonological and semantic factors also has some reflexes on the grammatical level, although here the evidence is more equivocal. The 1–2 sequences do obey the traditional criteria for the grammatical word: they cannot be permuted or interrupted. The situation here is complicated by the fact that parenthetical elements are the only ones which could conceivably interrupt a N+ADJ structure; other possibilities are ruled out on grammatical grounds. But parenthetical expressions serve our purpose: interruption is only possible with 2–1 sequences:

(14) nóż—powiedzmy—kuchenny
(*1...2)

which underlines the status of 1–2 sequences as lexical nominals. There is, however, an important difficulty. If 1–2 sequences are dominated by N, they should behave like regular nouns with regard to the embedding of adjectives from relative clauses. Instead, they behave like N+ADJ *Noun Phrases*:

(15) *nóż kuchenny żelazny (1–2...)
żelazny nóż kuchenny (3–1–2)

This makes *kuchenny* a regular case of a postnominal attributive adjective, which makes $T_{\text{ADJ-FRONTING}}$ obligatory for the embedding of further adjectives. Consequently, the future 1–2 sequences must be $_N$(N+ADJ) for the phonological rules, and $_{NP}$(N+ADJ) for the grammatical rules. It would be possible, but costly, to mark *nóż kuchenny* lexically with some trigger for stress assignment. The only other feasible alternative seems to be to make $\mathrm{T}_{\mathrm{ADJ\text{-}FRONTING}}$ capable of peeking into the structure of complex nominals. This is unfortunate and not a little *ad hoc*, but seems to be necessary.

The argument has, of course, one significant and at the moment insurmountable weakness: why is it that *nóż żelazny* acquires the status of a lexical nominal, whereas *nóż żelazny* and *książka kuchenna* do not? This is the point at which grammar, semantics and phonology intersect with linguistic pragmatics and factors of culture and the context of language use. There are, for example, instructive cases of similar problems in American and British English, where an Englishman in the USA may be misunderstood if he says *WHITE HOUSE* rather than *WHITE house*, and *HOT DOG* rather than *HOT dog*. The simple answer is that adjective+noun collocations in frequent use, and referring to common everyday objects, may acquire 1–2 stress and the status of a lexical nominal. The explanation of this phenomenon is anything but simple. It is likely to be semantico-pragmatic in nature, and I am not aware so far of any criterion which would help sort out the potential 1–2 cases from the 2–1 cases. People in the United Kingdom do, after all, talk of the White House and eat hot dogs[2], and quite frequently at that. Nor can I see why some of the 1–2 N+ADJ sequences in Polish seem not to have 2–1 parallels in the non-contrastive sense. It presumably has something to do with the number of semantic relations which can be reasonably thought to exist between certain nouns and adjectives. Diachronically, I suspect that 1–2 sequences are derived from 2–1 sequences that become particularly common in everyday use. Synchronically I can see no obvious solution.

Nevertheless, this analysis does allow us to state some aspects of the problem more clearly. We can specify the general characteristics of the grammatical distinction between Polish 2–1 and 1–2 N+ADJ collocations, and the lines along which we would describe the semantic differences between them. We can point to the very considerable grammatical and semantic similarities between Polish N+ADJ and English ADJ+N collocations — similarities which again follow the phonological criteria of 2–1 or 1–2 stress. And we can show, with reference to Chomsky & Halle's Nuclear Stress Rule, the essential difference between Polish and English. English assigns rightmost stress to constituents in phrases, and leftmost stress to constituents inside phonological words. Any violation of this rule results in contrastive stress.

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[2] Over the last 6 months ro so the BBC has begun saying *WHITE House* with increasing frequency — although it is impossible to say whether this is a matter of frequency of usage, ro of interference from American English. *HOT DOGS* remain.

Polish, on the other hand, stresses Noun Phrases consisting of a noun and an adjective 2–1; this is non-contrastive except when the normal word order is reversed. Furthermore, Polish stresses lexical nominals (consisting of a noun and an adjective) 1–2. It is usually possible to stress the same N+ADJ sequence 2–1, in which case the semantic relations between the noun and the adjective undergo a change parallel to normal ADJ+N Noun Phrases. As far as I know, all such complex lexical nominals (N+ADJ) have a postnominal adjective: pre-nominal adjectives, mainly the "qualitative" adjectives like *good* and *heavy*, are not the sort of adjectives which collocate with a noun to form a referent of a special or frequent type; rather, they add attributes to a nominal. This again takes us into the area of semantic pragmatics, and I shall sidestep the question here.

A generative grammar would handle these matters in the following way. The "standard model" of *Aspects* (Chomsky 1965), or its lexicalist-interpretive offspring, would simply enter the complex nominals as nominals in the lexicon. This raises three problems. First, concord rules must be able to peek inside the nominal, which is still morphologically structured as N+ADJ; second, $T_{\text{ADJ-FRONTING}}$ must also peek inside the complex nominal if it is to operate correctly; and third, this solution has the semantically unilluminating result of showing no similarity at all between 1–2 *nóż kuchenny*, a lexical nominal, and 2–1 *nóż kuchenny*, which is a Noun Phrase resulting from the embedding of an adjective out of some kind of relative clause. The generative semantic model can show semantic distinctions and connexions between complex nominals and N+ADJ Noun Phrases, but only at some cost. With *nóż kuchenny*, the 1–2 version is derived from something like "N_1 of a type associated with N_2", and the 2–1 version from, say ,"N_1 which is now in use in N_2". The product of these lexical transformations may be either a complex segment dominated by N, or a Noun Phrase. If the 1–2 version is a Nominal, the stress-assigning rules can automatically distinguish it from the Noun Phrase, but the transformations deriving the nominal and the Noun Phrase must somehow be adjusted to produce the correct output. At the moment, I do not see a means of doing this in a way which is not *ad hoc*. Alternatively, the prelexical rules may have Noun Phrases as their output, in which case we need global rules to ensure that the future 1–2 version is correctly stressed. Notice, however, that this solution does deal naturally with the difficulties of $T_{\text{ADJ-FRONTING}}$, since the global rules can trigger the fronting rule at little additional cost. Nevertheless, the relation between the 1–2 and 2–1 versions is presumably of a semantico-pragmatic nature, and the underlying sources of 1–2 complex nominals are very confused. In view of these difficulties, it is probably wiser to decide in favour of the standard model — at least for the time being.

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THE ROLE OF SENTENCE STRESS IN THE INTERPRETATION OF COREFERENTIALITY IN ENGLISH AND POLISH

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1. English speakers, when they want to indicate that a noun refers to the same person or object as the preceding noun, have at their disposal the definite article. When a new object is introduced, the indefinite article is used. Mistakes as to the identity of referents are not frequent.

Native speakers of Polish know that mistakes as to the identity of referents are equally infrequent in their language. We seldom have doubts whether a noun refers to the same person or object or not. Otherwise, communication would be extremely difficult, if not impossible.

As I have mentioned, English uses articles, among others, as surface exponents of coreferentiality, although not all occurrences of the articles are involved in the phenomenon. For example, in

(1) **Mary does not have a car. The car is black.*

the indefinite article does not establish coreferentiality. Negation, both syntactic and lexical, has been found to disallow the indefinite article to establish coreferentiality (Karttunen 1969). This is only natural since a part of the meaning of the following definite noun is the presupposition that the referent exists, which is exactly what negation denies.

Also in such structures as

(2) *Bill is the best student.*

the definite article does not refer to any previously mentioned noun as coreferential with it.

The present paper will discuss some of the coreferential occurrences of the articles and personal pronouns in relation to the sentence stress in English and in Polish.

2.1. In 1970, Akmajian and Jackendoff noticed that the place of the sentence stress determines coreferentiality of pronouns.

For example, in

(3) *John hit Bill and then George hit him.*

a) *him* refers to *Bill* if it is unstressed,
b) *him* refers to not-*Bill* if it is stressed (Chomsky (1971:211)) says: "... to John or to someone other than John or Bill").

I first want to examine the occurrence of the articles with respect to sentence stress. Considering (4)

(4) *He was reading a book.*

with normal intonation, we find that the stress is on the indefinite noun. For a similar sentence (5)

(5) *He was reading the book.*

with the sentence stress on the definite noun (non-contrastive reading) I could find no context in which it could be used[1]. The natural or normal intonation is with the stress on the verb. Thus, (5) with the sentence stress on the verb is correct, while with the stress on the noun it is not. Consider further (6) and (7):

(6) *He bought a* book *yesterday.*
(7) *He bought the book* yesterday.

(6) is similar to (4) in that the sentence stress falls on the indefinite nounl (7) has its sentence stress not on the verb, however, but on the adverbia; phrase.

Other examples of a similar type will indicate that normal intonation places the sentence stress on the indefinite noun if such is present, as in (8)

(8) *I saw a* cat *under the table.*

while in a sentence with a definite noun the sentence stress will fall on the element following it if such an element is present, as in (9)

(9) *I saw the cat under the* table.

or on the verb preceding the noun if nothing follows, for example (10)

(10) *I* saw *the cat.*

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[1] At the 4th international conference In English-Polish contrastive linguistics at Ustronie (Dec. 13–15, 1973), prof. Werner Winter called my attention to the fact that the stressed definite noun in (5) would mean the Bible. This is in perfect agreement with my discussion of nouns marked 'unique'.

All this concerns nouns in the object position. With a definite noun in the initial, subject position, as in (11)
noun in the initial, subject position, as in (11)

(11) *The man was coming.*

the sentence stress falls on the verb.

Sentences with an indefinite noun in the subject position are perhaps less frequent but (12)

(12) *A man was coming.*

is a correct sequence to something like (13):

(13) *I heard a noise and turned round.*

Notice that in (12) the sentence stress is on the indefinite noun and in the initial position. Notice also that (12) with the sentence stress on *coming* does not make sense.

Conclusions of this extremely brief account are as follows:

I) If an indefinite noun is present, it bears the sentence stress in normal intonation (examples 4, 6, 12), no matter what its function and position is in the sentence.

II) In the presence of a definite noun the sentence stress falls on the final element if nothing follows the noun (examples 8, 9, 11).

or on the preceding element if nothing follows, usually a verb (example 10), but also a preposition (The cat was *under* the table).

III) is an interesting, I think, observation concerning adverbials and noun marked with a feature 'unique'.

Notice, first, that many adverbials have a definite noun, for example (9) or (14)

(14) *I am going to the cinema.*

and none the less it normally bears the sentence stress, conflicting with conclusion II above. Notice, however, that if we add an opening sentence (15)

(15) *There was a big round table in my room.*

to (16)

(16) *The cat was sleeping under the table.*

the sentence stress in (16) will move on to the preceding verb, thus satisfying conclusion II.

Similarly nouns marked 'unique' as in (17) or (18)

(17) *I looked at the sun.*
(18) *Bill is the best student.*

have the stress on the definite noun. Again, however, if we add an opening sentence (19)

(19) *He asked me to look at the sun.*

to (17), the sentence stress will shift to the verb

(20) *I* looked *at the sun* (but saw nothing).

It would seem, then, that conclusion II refers to textually determined coreferentiality, whereas examples (16) and (17) are cases of situational anaphora. Stockwell, Schachter and Partee (1968) use the terms 'linguistic' and 'non-linguistic' anaphora without, however, any further consequences. The division finds material justification in the examples discussed above. It seems, then, that a distinction between textual (linguistic) and situational (non-linguistic) anaphora is necessary. Furthermore, we can see that situationally coreferential nouns behave as new information of the discourse (focus-sentence stress association) without the necessity for the referent itself to be new to the speaker and to the listener, as in the case of *the sun*, for example.

All textually introduced nouns behave in the way described in conclusion II.

The examples discussed so far do not exhaust the possibilities of the sentence stress placement. Let us, now, consider some of the above sentences with a different place of the sentence stress. For example, (4) may have the stress on any element, i.e.,

(4a) He *was reading a book.*
(4b) *He* was *reading a book.*
(4c) *He was* reading *a book.*

However, it is clear that all these a) have emphatic stress, b) express contrast. We may also have emphatic stress on *book*, as in (4d)

(4d) *He was reading a* book.

The same is true for (5):

(5a) He *was reading the book.*
(5b) *He* was reading *the book.*
(5c) *He was reading the* book.
(5d) *He was* reading *the book.*

In all examples of (4) and (5) the intonation pattern changes, too (higher pitch). Nothing, however, changes in coreferentiality if emphatic stress is used. It follows that normal stress and emphatic stress are two different kinds of stress and must be introduced separately.

2.2. Let us see, now, what the role of the sentence stress is in Polish. In one of my earlier papers (Szwedek 1974) on definiteness and indefiniteness of nouns I indicated that word order in Polish is one of the ways in which coreferentiality is expressed. Thus, for example, of the two sequences (21)—(22) and (21)—(23)

(21) *Widziałem na ulicy kobietę.*
(*I saw on street woman* (Acc))

(22) *Kobietę bił mężczyzna.*
(*Woman* (Acc) *was hitting man* (Nom))

(23) *Mężczyzna bił kobietę.*
(*Man* (Nom) *was hitting woman* (Acc))

only the former constitutes a discourse. (23) with the same intonation as (22), i.e., with the sentence stress on the final noun can not be a sequence of (21). For (23) to become a possible sequence sentence of (21), a shift of the sentence stress to the initial position is necessary, as in (24)

(24) Mężczyzna *bił kobietę.*
(*Man* (Nom) *was hitting woman* (Acc))

But then the meaning of the stressed element is contrastive (emphatic stress), the unstressed element retaining its coreferential interpretation.

Consider, next, (22) and (23) as sequences of (25)

(25) *Widziałem na ulicy mężczyznę.*
(*I saw on street man* (Acc))

Only (23) may form a discourse with (25). If we want (22) to follow (25) we have to move the stress to the noun in the initial position. Conclusions of this sketchy presentation are as follows:

I. The normal intonation seems to be the one with the sentence stress on the final element.

II. If a noncoreferential noun is present, it bears the sentence stress in normal intonation.

III. Hence, it is the word order that changes—moving the indefinite noun to the final position — rather than the place of the sentence stress. It must also be added that such changes are independent of the syntactic functions the nouns have in the sentence.

As regards adverbial phrases in Polish, as in

(26) *Kot spał pod stołem.*
(*Cat* (Nom) *was sleeping under table*)

(27) *Idę do kina.*
(*I am going to cinema*)

we find that, as in English, they are stressed. If we want to make the noun coreferential we must, again as in English, remove the sentence stress from it as in the following sequence:

(28) *W domu był duży okrągły stół.*
(*In house was big round table*)

(26) *Kot* spał *pod stołem.*

(26) as a sequence sentence is much improved if we add a demonstrative pronoun, as in, (30)

(30) *Kot* spał *pod tym stołem.*
(*Cat* (Nom) *was sleeping under this table*)

The explanation of this improvement is not difficult, it seems. Sentence final position is associated with indefiniteness so strongly that even with the shift of the stress the indefinite meaning does not disappear completely. Only when we add a demonstrative pronoun are the doubts removed. This, I think, is an important point in demonstrating the significance of word order in Polish[3] in the interpretation of coreferentiality of nouns and the changing status of demonstrative pronouns.

Conclusions I-III above gain in clarity if one of the nouns in, for example, (22) and (23) is replaced by a pronoun, as in (31)

(31) *Mężczyzna bił ją.*
(*Man* (Nom) *was hitting her*)

We can not have the sentence stress on the pronoun, in normal intonation. Thus (32)

(32) *Mężczyzna bił* ją.
(*Man* (Nom) *was hitting her*)

is incorrect.

We have, then, two possibilities:

a) with *mężczyzna* coreferential and thus unstressed. Then the verb is naturally stressed, as in (33)

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[3] The problems seem to be similar in other languages. For example, prof. K. Sajavaara and W. Bantaš confirmed it for Finnish and Roumanian respectively.

(33) *Mężczyzna* bił *ją*. (or *Mężczyzna ją* bił.)
(*Man was hitting her*, or *Man her was hitting*)

b) with *mężczyzna* noncoreferential and stressed, as in (34)

(34) *Bił ją* mężczyzna.
(*Was hitting her man* (Nom))

If we move the stressed item in (33) and (34) to the initial position, we will get an emphatic interpretation.

3.1. Example (3) introduced the discussion relating to the significance of the sentence stress in the interpretation of coreferentiality. Let us, now, give more attention to this problem, with regard to pronouns.

It is obvious that personal pronouns always have a coreferential interpretation. Thus they should not bear the sentence stress in normal intonation. Since all personal pronouns are coreferential, the interesting question is not whether a pronoun is coreferential or not but what its antecedent is. Let me, first, return to example (3) with a slight modification which will make it a bit more difficult[3]:

(35) *John hit Bill and then he hit him.*

Assume, first, that *he* and *him* are interpreted as coreferential with *John* and *Bill* respectively, and thus do not have the sentence stress. The sentence stress would then have to be on *hit* identical to the verb in the first clause. Therefore, the second clause, being identical to the first, has no logical basis for existence. To receive a correct sentence we must change the verb, too. For example

(36) *John hit Bill and then he kicked him.*

with *kicked* as the new and stressed information. Notice also that in this case both the pronouns are unstressed and receive a coreferential interpretation.

If (35) cannot have the sentence stress on *hit*, then two other possibilities are left: with the sentence stress on *he*, as in (37)

(37) *John hit Bill and then* he *hit him.*

a) *him* (unstressed) is coreferential to *Bill*,

b) *he* is noncoreferential to *John* (*Bill* is excluded from considerations because his coreferentiality has already been determined), i.e., it denies a coreferential interpretation within the sentence. Thus it seems necessary to distinguish extra- and intrasentential coreferentiality.

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[3] Other examples like the one given by Akmajian and Jackendoff (1970) — *After he woke up John went to town* — have additionally different restrictions on the interpretation of coreferentiality. I agree with Lakoff (1968) here that pronominalization is a complex phenomenon involving syntactic as well as suprasegmental facts.

With the sentence stress on *him*, as in (38)

(38) *John hit Bill and then he hit* him.

a) *he* is coreferential with *John*,

b) *him* is noncoreferential with *Bill* (*John* being excluded on the same grounds as *Bill* in b) above).

Notice, first, that the unstressed pronoun has a coreferential interpretation, and the stressed pronoun a noncoreferential interpretation, regardless of the syntactic function it has in the sentence. Notice also that the sentence stress on any of the pronouns is of the emphatic type. The explanation seems to be easy. In normal intonation the unstressed pronoun receives a coreferential interpretation. Therefore, what the sentence stress does in (37) and (38) is to deny the coreferential interpretation of the pronoun with the same-function noun in the preceding clause. That is, in (37) it means: *specifically not-John*, and in (38): *specifically not-Bill*. That *John* is excluded as a candidate-referent of *him* in (38) is due to the fact that *he* is not stressed and must be interpreted as coreferential to *John*. However, if we remove the possibility of interpreting *he* as coreferential with *John*, as in (39)

(39) *John hit Bill and then George hit* him.

him will include John. But it will still have the meaning: *not-Bill*.

3.2. In this section I want to examine a Polish sentence (40)

(40) *Janek uderzyl Tomka a potem on go uderzyl.*
(John hit Tom and then he him hit)

similar to the English example (35). The sentence stress on the verb is excluded for the same reasons as have been given for (35). With the sentence stress on the subject pronoun *on*, as in (41)

(41) *Janek uderzyl Tomka a potem* on *go uderzyl.*
(John hit Tom and then he hit him)

on is noncoreferential with *Tomek*.

If we stress the object pronoun changing the unstressed form to the stressed *jego*, we will get (42)

(42) *Janek uderzyl Tomka a potem on* jego *uderzyl.*
or *(John hit Tom and then he him hit)*
(43)
(43) *Janek uderzyl Tomka a potem on uderzyl* jego.
(John hit Tom and then he hit him)

Jego being under the sentence stress is noncoreferential with *Tomek*. However, contrary to English, *on*, now is not necessarily coreferential to *Janek*. Only when we omit the subject pronoun, as in (44)

(44) *Janek uderzyl Tomka a potem uderzyl* jego.
(John hit Tom and then hit him)

is the understood subject of the second clause coreferential with *Janek*. It does not follow, however, that we may omit the object pronoun when it is unstressed[4], as in (45)

(45) *Janek uderzyl Tomka a potem on uderzyl.*

There are some interesting restrictions here:
a) we delete only the subject pronoun, but never the object pronoun alone. If the object pronoun is to be deleted, the subject pronoun must be removed, too. Compare (46), (47) and (48)

(46) *Janek uderzyl Tomka a potem on kopnąl.*
(John hit Tom and then he kicked)
(47) *Janek uderzyl Tomka a potem go kopnąl.*
(John hit Tom and then him kicked)
(48) *Janek uderzyl Tomka a potem kopnąl.*
(John hit Tom and then kicked)

b) if both are to be deleted, the stress in the first clause must fall on the verb, too (naturally, the stress falls on the verb in the second clause because there is nothing else left).

In English, subject pronoun deletion is impossible. We must delete both the subject and the verb, as in (49)

(49) *John hit Bill and then him.*

4. I think I have shown that the sentence stress plays the same role in English and in Polish with respect to coreferentiality. One of the specific conclusions that I want to repeat and stress is that word order in Polish is not free as has been claimed so far, but it is closely connected with the sentence stress and coreferential relations, and thus strictly determined. In English, with different word order restrictions, it is the sentence stress that moves.

It follows from the presentation that the nature of the normal stress and contrastive stress is different in that the normal stress is predictable, while contrastive stress is not. The failure to distinguish between the two stresses accounts for the difficulties of, for example, Jackendoff (1972), in incorporating phonological contrast (REception/CONception) into his stress rules. It also makes Bolinger (1972) criticize (correctly in part) Bresnan (1971) in his "Accent is predictable (if you're a mind-reader)".

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[4] Similar facts have been found in Serbo-Croatian, as was told by prof. Wayles Browne.

The general conclusions that I want to emphasize are as follows:

A) it is necessary to distinguish between normal and contrastive stress,
B) it is necessary to distinguish between textual and situational coreferentiality,
C) textual coreferentiality must be subdivided into intrasentential and extrasentential.

The interpretation of coreferentiality of the three types (intrasentential, extrasentential, and situational) depends crucially on the type and place of the sentence stress.

The way in which the relations discussed above could be incorporated in the grammar would depend on the theoretical framework (roughly generative semantics or interpretive semantics). It is clear, however, that no sentence grammar can now account for the phenomena requiring reference outside the sentence, for example extrasentential and situational coreferentiality. These will require a grammar of text. It will be fascinating to see how text parameters such as, for example, coreferentiality, interact with typically sentential elements like, for example, sentence stress, focus and structure.

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FINNISH AND POLISH VOWELS

(A preliminary contrastive approach)

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I. *Introductory remarks*

Both Finnish and Polish vowel systems display certain phenomena which have created considerable problems for scholars. Thus the phonemic interpretation of Finnish long vowels as well as the phonemic status and phonetic nature of nasal vowels in Polish have not yet been given satisfactory solutions. In the present paper we do not intend to solve any of these problems but we shall rather choose the solutions which seem to us best in serving our purpose. And this is a practical one: the learning of Finnish by Poles and the learning of Polish by Finns.

There is no unanimity among scholars as to the number of vowel phonemes in the Finnish inventory. This number depends to a great extent on the interpretation of quantity. At least three competing views have been put forward:

(1) The most widely accepted interpretation provides for eight segmental phonemes: /i e æ ü ö u o a/. The phonetically long vowels are treated biphonematically, i.e., as sequences of two short identical segmental phonemes (Troubetzkoy 1949 : 201; Sauvageot 1949 : 16; Harms 1960 : 7; Enkvist 1962 : 587; Raun 1963 : 20; Wiik 1965 : 40 ff.; Itkonen 1968 : 95; Karlsson 1969 : 352–355; Lehtonen 1970 : 30 ff.).

(2) In the second solution long vowels are considered as a combination of a short phoneme and a chroneme (i.e. suprasegmental phoneme of length). In this case we get nine phonemes eight of which are segmental and one is suprasegmental (cf. Enkvist 1962:587; Robins 1965:135, 208 f.).

(3) In the third approach long vowels are interpreted monophonematically, i.e., as different paradigmatic phonemes. As a result we arrive at sixteen

vowel phonemes (Cf. Malmberg 1944 : 87; Serebrennikov and Kert 1958: 8 ff; Hajdú 1968 : 154).

It should be noted that the third possibility has the least number of adherents. The problem is only to what extent this is justified. If we remove the quantity factor from the paradigmatic plane, we have to shift it to the syntagmatic one. The lack of syntagmatic contrast between two neighbouring vowels may, however, be one of the factors contributing to their perceptive indivisibility.

The phonemic system of a language may be approached from various theoretical positions. The choice of an appropriate model for description should be determined by the goal for which a given model is being constructed. For our subsequent considerations we have decided to use the system containing sixteen vowel phonemes because we intuitively feel that for language teaching and learning the maximal phonemic system is the most convenient. Moreover, long vowels seem to be perceived by native speakers of Finnish as indivisible entities and so exist as abstract mental images in the brain. Independent syntagmatic analysis of two identical phonemes, i.e., without relying on paradigmatic information is hardly possible because of the lack of syntagmatic contrast. And this lack of syntagmatic contrast may contribute to the monophonematic interpretation of long vowels.

II. *Inventory of Finnish vowel phonemes*

Table 1

Phonemes	Allophones	Examples
/i/	[i]	***lika*** 'dirt'; ***sima*** 'honey'; ***oppi*** '(he) learned';
/i:/	[i:]	***liika*** 'excess'; ***siima*** 'line'; ***oppii*** '(he) learns';
/e/	[e]	***te*** 'you'pl.; ***esti*** '(he) prevented'; ***tule*** 'come'imper.;
/e:/	[e:]	***tee*** 'tea'; ***Eesti*** 'Estonia'; ***tulee*** '(he) comes';
/æ/	[æ]	***käry*** 'smell'; ***värin*** 'color'Gsg.; ***mätä*** 'rotten';
/æ:/	[æ:]	***kääry*** 'roll'; ***väärin*** 'wrong'; ***mätää*** 'of rotten';
/ü/	[ü]	***ryppy*** 'wrinkle'; ***typpi*** 'nitrogen'; ***synty*** 'birth';
/ü:/	[ü:]	***ryyppy 'drink'***; ***tyyppi*** 'type'; ***syntyy*** 'is born';
/ö/	[ö]	***pöllö*** 'owl'; ***löytö*** ‘discovery’;
/ö:/	[ö:]	***insinööri*** 'engineer'; ***Töölö*** 'district of Helsinki'; ***löytöön*** 'discovery'Illsg.;
/u/	[u]	***tuli*** 'fire'; ***uni*** 'sleep'; ***kulo*** 'wild fire';
/u:/	[u:]	***tuuli*** 'wind'; ***uuni*** 'oven'; ***kuulo*** 'hearing';
/o/	[o]	***kota*** 'hut'; ***koppi*** 'box'; ***sano 'say'*** 'imper. sg.
/o:/	[o:]	***koota*** 'collect'; ***kooppi*** 'spool'; ***sanoo*** 'says'
/a/	[a]	***kari*** 'rock'; ***takka*** 'fire place'; ***sata*** 'hundred';
/a:/	[a:]	***kaari*** 'curve'; ***taakka*** 'burdon'; ***sataa*** 'it is raining';

III. *The system of paradigmatic*[1] *oppositions in Finnish*

The number of sixteen vowel phonemes in Finnish makes necessary four binary decisions in order to distinguish a given vocalic phoneme from every other one. This results from the equation $H = \mathrm{ld}\ m$ (i.e., $H = \mathrm{ld}\ 16 = 4$). Thus the minimal number of relevant binary distinctive features to define a particular vowel in the Finnish vowel system equals 4. Of course, this number would be smaller in terms of ternary distinctive features. But it is a well known fact that languages are redundant and redundancy is also present at the phonemic level. On account of this the diacritic system employed in phonemics makes use of a larger number of distinctive features than the minimum required.

From the articulatory (kinemic[2]) point of view the oppositions between vowels in a language may be created along several dimensions which result from the co-operation of various positions of articulators (moveable organs) and various points of articulation (non-moveable organs) as well as from tension in the vocal tract and the duration of an articulatory position in time.

For the Finnish vowel system it is necessary to distinguish the following six articulatory dimensions: (1) duration in time; (2) the horizontal position of the tongue; (3) the place of articulation; (4) the position of the lips; (5) the degree of supraglottal aperture; (6) the vertical position of the tongue.

(1) *Duration in time* conditions the quantity opposition *short* vs. *long*. In Finnish every short vowel phoneme has its long counterpart. Thus there are two series of vowels based on this opposition:

short			long		
/i/	/ü/	/u/	/i:/	/ü:/	/u:/
/e/	/ö/	/o/	/e:/	/ö:/	/o:/
/æ/		/a/	/æ/		/a:/

This distinction does not depend on stress, i.e., it is preserved also in unstressed syllables (cf. *sata* "hundred" vs. *sataa* "it is raining").

(2) *The horizontal position of the tongue*, i.e., the location of the highest part of the tongue in the oral cavity in the horizontal plane, is the dimension according to which we recognize the opposition between *front* and *back* vowels:

front				back	
/i/	/i:/	/ü/	/ü:/	/u/	/u:/
/e/	/e:/	/ö/	/ö:/	/o/	/o:/
/æ/	/æ:/			/a/	/a:/

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[1] About the paradigmatic and syntagmatic relationship see Hjelmslev (1943:34).

[2] In the sense of kinemas, a term introduced by Baudouin de Courtenay.

The articulation of front vowels is connected with shifting the body of the tongue forward while the front of the tongue is raised against the hard palate. In articulating back vowels the tongue is retracted and its middle or back part is raised in the direction of the soft palate (velum) and/or back wall of the pharynx (Sovijärvi 1963 : 13 ff.).

(3) *The place of articulation* leads to the arrangement of vowels corresponding to that given in point (2). We have here to do with the opposition *palatal* vs. *velar*:

palatal				velar	
/i/	/i:/	/ü/	/ü:/	/u/	/u:/
/e/	/e:/	/ö/	/ö:/	/o/	/o:/
/æ/	/æ:/			/a/	/a:/

(4) *The position of the lips*, or the degree of rounding. In accordance with this dimension two series of vowels are also distinguished: *labialized* (rounded) and *non-labialized* (unrounded):

non-labialized		labialized			
/i/	/i:/	/ü/	/ü:/	/u/	/u:/
/e/	/e:/	/ö/	/ö:/	/o/	/o:/
/æ/	/æ:/				
/a/	/a:/				

The distinction *rounded* vs. *unrounded* is phonemically significant in Finnish unlike in English or Polish in which the labialization is always a concomittant feature of the back vowels. In Finnish the labialization concerns not only back vowels but also the front ones.

(5) *The degree of supraglottal aperture.* The opposition *close* vs. *semi-close* vs. *open* in Finnish is based on this dimension.

close	/i/	/i:/	/ü/	/ü:/	/u/	/u;/
semi-close	/e/	/e:/	/ö/	/ö:/	/o/	/o:/
open	/æ/	/æ:/			/a/	/a:/

(6) *The vertical position of the tongue*, i.e., the location of the highest part of the tongue in the oral cavity in the vertical plane. Along this dimension is arrived at the same arrangement of vowel phonemes as is the case with the degree of supraglottal aperture. Thus the vertical position of the tongue corresponds to the degree of supraglottal aperture and the features originating along both the dimensions are mutually dependent, i.e., *high* is associated with *close*, *mid*, with *semi-close* and *low* with *open*.

high	/i/	/i:/	/ü/	/ü:/	/u/	/u:/
mid	/e/	/e:/	/ö/	/ö:/	/o/	/o:/
low	/æ/	/æ:/			/a/	/a:/

The distinctive features along dimensions (1), (2), (3) and (4) are binary; those along (5) and (6), which in addition correspond to each other, are ternary. Moreover, it is worth notice that the opposition along the dimension of tension in the vocal tract (*tense* vs. *lax*) as well as that of the position of velum (*oral* vs. *nasal*) are not phonemically relevant in Finnish.

Finnish phonemes may be encoded with the help of eight distnctive features which comprise aredundant and redundant ones. One ternary decision may be reduced to two binary decisions: thus the opposition ***high*** vs. ***mid*** vs. ***low*** is reducible to: ***mid*** vs. ***non-mid***; ***high*** vs. ***low***.

Table 2

Articulatory distinctive features (binarily arranged) \ Phonemes	i	i:	e	e:	æ	æ:	ü	ü:	ö	ö:	u	u:	o	o:	a	a:
short : long	−	+	−	+	−	+	−	+	−	+	−	+	−	+	−	+
front : back	−	−	−	−	−	−	−	−	−	−	+	+	+	+	+	+
palatal : velar	−	−	−	−	−	−	−	−	−	−	+	+	+	+	+	+
unrounded : rounded	−	−	−	−	−	−	+	+	+	+	+	+	+	+	−	−
semiclose : non-semiclose	+	+	−	−	+	+	+	+	−	−	+	+	−	+	+	+
close : open	−	−			+	+	−	−			−	−			+	+
mid : non-mid	+	+	−	−	+	+	+	+	−	−	+	+	−	−	+	+
high : low	−	−			+	+	−	−			−	−			+	+

IV. *Inventory of Polish vowel phonemes*

If the suggestion could be accepted that every oral phoneme has its nasal counterpart in the Polish vowel system, then the inventory of Polish vowel phonemes would consist of the ten following items:

Table 3

Phonemes	Allophones	Examples
/i/	[i]	*pila* [ṕiwa] 'saw'; *sito* [citə] 'sieve';
	[**i**]	*pyl* [p**i**w] 'dust'; *typ* [t**i**p] 'type';
/ĩ/	[ĩ][in][iŋ]	*winszować* [v́ĩʃəvat͡c, v́inʃəvat͡c] 'to congratulate'; *wĩnda* [v́ĩda, v́inda] 'lift'; *finka* [f́ĩka, fiŋka] 'bowie knife';
	[**ĩ**] [**i**n] [**i**ŋ]	*czynsz* [t͡ʃ**ĩ**ʃ, t͡ʃ**i**nʃ] 'rent'; *syndykat* [s**ĩ**dikat, s**i**ndikat] 'syndicate'; *tynk* [t**ĩ**k, t**i**ŋk] 'plaster';
/ɛ/	[ɛ]	*lek* [lɛk] 'drug'; *wiek* [v́ɛk] 'century, age';
	[e]	*siedzi* [ɕed͡ʑi] '(he) is sitting';
/ɛ̃/	[ɛ̃][ɛm][ɛŋ]	*kęs* [kɛ̃s, kɛns] 'piece, bit'; *pęto* [pɛ̃tə, pɛntə] 'fetter'; *ręka* [rɛ̃ka, rɛŋka] 'hand';

Phonemes	Allophones	Examples
/u/	[u]	*lud* [lut] 'people, nation'; *kura* [kura] 'hen';
/ũ/	[ũ][un][uŋ]	*kunszt* [kũʃt, kunʃt] 'masterly skill'; *fundusz* [fũduʃ, fundũʃ] 'fund'; *punkt* [pũkt, puŋkt] 'point';
/ɔ/	[ɔ] [o]	*oko* [ɔkɔ] 'eye'; *sok* [sɔk] 'juice'; *ciocia* [t͡ɕot͡ɕa] 'auntie';
/ɔ̃/	[ɔ̃][ɔn][ɔŋ]	*wąż* [vɔ̃ʃ, vɔnʃ] 'snake'; *kąt* [kɔ̃t, kɔnt] 'angle'; *pąk* [pɔ̃k, pɔŋk] 'bud';
/a/	[a] [æ]	*mak* [mak] 'poppy'; *kat* [kat] 'executioner'; *dziadzio* [d͡ʑæd͡ʑo] 'grandpa';
/ã/	[ã][an][aŋ]	*awans* [avãs, avans] 'promotion'; *kant* [kãt, kant] 'arris, edge'; *bank* [bãk, baŋk] 'bank'

V. *The system of paradigmatic oppositions in Polish*

The following six dimensions account for relevant distinctions among Polish vowel phonemes: (1) the position of the velum; (2) the horizontal position of the tongue; (3) the position of the lips; (4) the place of articulation; (5) the degree of supraglottal aperture; (6) the vertical position of the tongue.

(1) *The position of the velum* is the source of binary opposition *oral* vs. *nasal* which affects all Polish vowels:

oral	nasal
/i/ /u/	/ĩ/ /ũ/
/ɛ/ /ɔ/	/ɛ̃/ /ɔ̃/
/a/	/ã/

The nasality of vowels is connected with the lowering of the velum which opens the passage to the nasal cavity allowing the air to escape through the nose during the articulation of a vowel or its part.

Usually only two nasal vowel phonemes /ɛ̃/and /ɔ̃/ are posited for Polish. Their allophones [ɛ̃] and [ɔ̃] appear before all consonants. Before stops and affricates, rarely before spirants, [ɛ̃] and [ɔ̃] are often resolved into *oral vowel + nasal consonant*. In the same manner the remaining nasal vowel phonemes i.e. /ĩ/, /ũ/, /ã/ behave on the allophonic level and so /ɛ̃/ and /ɔ̃/ are no exceptions to the rule. Even in final position occur [ĩ ã ũ] (cf. *čɛgɔ pã χcɛ* "what do you want"; *mami̇̃ synek* "sissy"; *sũ zɣapaɣ śɛ* "catfish was caught"). Thus we do not agree with those statements according to which nasal vowels are quite impossible before affricates and plosives and that their pronunciation in these positions is highly artificial. Therefore, in interpreting nasal vowels in Polish we could follow two alternative solutions:

(1) either to assume only oral vowels while accounting for nasal vowels as

the allophonic realization of the combination *oral vowel+nasal consonant*;

(2) or to postulate for every oral vowel its nasal counterpart interpreting the combination *oral vowel + nasal consonant* as the main variphonic realization of the nasal vowel phoneme before affricates and stops.

The former solution is hardly probable because of such word-final oppositions as e.g.: *te* [tɛ] 'these' Npl. fem. vs. *tę* [tɛ̃, tɛ] 'this' Acc. sg. fem. vs. *ten* [tɛn, tɛ̃] 'this' Nsg. masc.; *to* [tɔ] 'this' NAcc. sg. neutr. vs. *tą* [tɔ̃, tɔ] 'this' Acc. sg. fem. vs. *ton* [tɔn, tɔ̃] 'tone'.

There are different approaches to phonematic interpretation of nasal vowels in Polish (cf. Szober 1931^3 : 47 ff; Gaertner 1931 : 30 f; Troubetzkoy 1949 : 194; Benni 1964^2 : 36 ff; Klemensiewicz 1939–44 : 19; Trager 1938; Folejewski 1956; Šaumjan 1951 : 401 ff.; Stankiewicz 1956 : 519 f; Milewski 1973 : 157; Stieber 1948 : 59 ff.; Stieber 1966 : 102 ff.; Kučera 1968; Schenker 1954; Jassem 1958 : 304 ff., Łobacz 1971). In the present paper we have decided the matter in favor of alternative (b) which better fits the principle of symmetry but which may be considered from the point of view of the traditionally accepted Polish vowel system as an exercise in phonemic extravagance. One cannot deny that such an interpretation of nasal vowels is a bit arbitrary because of the complete lack of paradigmatic opposition between /ĩ ũ ã/ and /in un an/ respectively.

There is no doubt that [ĩ ũ ã] and [in un an] represent one and the same mental entity, i.e., phoneme, respectively. Schoolchildren regularly mix up *ę* with *en*, *ą* with *om* in spelling (cf. Bulczyńska-Zgółka 1975). There is, however, a problem what kind of phonemic interpretation native speakers resort to. It may be that this interpretation is at the moment a little unstable. Putting this differently, one can ask a question if native speakers perceive here one phoneme, i.e., *nasal vowel*, or a combination of two phonemes, i.e., *oral vowel + nasal consonant*.

The developing morphological opposition *momentaneous* vs. *frequentative* and *durative* vs. *frequentative* which are based upon the distinction /ɔ̃/ vs. /ã/ seem to bear a convincing evidence in support of monophonematic interpretation; cf. *łączyć* : *złączać*; *sączyć* : *wysączać*; *trącić* : *wytrącać*; *zakąsić* : *zakąszać*. These oppositions fit well into the productive alternation pattern in which verbal roots expressing durative or momentaneous action display /ɔ/, while the roots expressing frequentative action have /a/; cf. *chodzić* : : *chadzać*; *topić* : *przetapiać*; *skoczyć* : *skakać* (Szober 1963 : 35). Thus /ɔ/ relates to /a/ as /ɔ̃/ to /ã/.

In addition, our approach finds certain confirmation on the intralingual level. Namely, this agrees with the observations made by foreign speakers who lack nasal vowel phonemes in their language, e.g. Germans or Englishmen, that Poles tend to pronounce nasal vowels instead of the combination *oral* *vowel+nasal consonant* when learning the respective foreign languages (cf. e.g. German *Land* [lant] being pronounced as [lãt] or English *month* being pronounced as [mãθ]). It seems as if this tendency in pronunciation derives from different phonemic status of nasal vowels, i.e., from the existence of nasal vowel phonemes in Polish and not merely from the allophones [ĩ ɛ̃ ã ɔ̃ ũ] of the respective oral phonemes.

The allophones of nasal vowels seem to acquire often a diphthongal nature being then transcribed as [iw̃ ɛw̃ aw̃ ɔw̃ uw̃], i.e., oral vowel followed by nasal glide. This phenomenon results from the asynchronic articulation of oral and nasal element. The onset of the latter is delayed (cf. Dłuska 1950: 53; Jassem 1951 : 97; Schenker 1954; Benni 1959^2 : 36 f.; Doroszewski 1963: 90; Biedrzycki 1963 : 35; Wierzchowska 1971 : 134 ff.; Biedrzycki 1972 : 42; Gussmann 1974 : 107 f.).

(2) *The horizontal position of the tongue* in Polish conditions the ternary opposition *front* vs. *central* vs. *back*:

front	central	back
/i/ /ĩ/		/u/ /ũ/
/ɛ/ /ɛ̃/	/a/ /ã/	/ɔ/ /ɔ̃/

Certain classification problems within this dimension are caused by /a/ which is sometimes thought of as a back vowel (cf. Dłuska 1950 : 38; Klemensiewicz 1070^6: 19; Szober 1931: 19 f.; Benni et al. 1923 : 24 ff.). In the neighborhood of palatal sounds the articulation of [ɛ a ɔ] is shifted more to the front which creates, consequently, their advanced and more palatal variants: [e æ o] (cf. *nieś* [ɲeɕ]; *siać* [ɕætɕ]; *ciocia* [tɕotɕa]).

(3) *The position of the lips*. The articulation of back vowels is linked always to the rounding of the lips, while for all front vowels the spreading of the lips is characteristic. Accordingly, we get along this dimension a ternary opposition which overlaps with that in (2):

spread	neutral	rounded
/i/ /ĩ/		/u/ /ũ/
/ɛ/ /ɛ̃/	/a/ /ã/	/ɔ/ /ɔ̃/

(4) *The place of articulation* serves as basis for distinguishing *palatal* and *velar* vowels:

palatal	velar
/i/ /ĩ/	/u/ /ũ/
/ɛ/ /ɛ̃/	/ɔ/ /ɔ̃/
	/a/ /ã/

(5) ***The degree of supraglottal aperture*** results in the ternary opposition ***close*** vs. ***semiopen*** vs. ***open***:

close /i/ /u/ /ĩ/ /ũ/
semiopen /ε/ /ɔ/ /ε̃/ /ɔ̃/
open /a/ /ã/

(6) ***The vertical position of the tongue***. On the scale of this dimension we arrive at the same classification as in (5). This means that one of these dimensions is redundant:

high /i/ /u/ /ĩ/ /ũ/
mid /ε/ /ɔ/ /ε̃/ /ɔ̃/
low /a/ /ã/

The distinctive features based on dimension (1) and (4) are binary; the rest, i.e., those based on dimension (2), (3), (5) and (6) are ternary. It is also to be remembered that the dimension of tension in the vocal tract (*tense* vs. *lax*) and duration in time have no significance in the organization of Polish vowel system.

Polish phonemes may be encoded with the help of ten binary distinctive features which embrace aredundant and redundant ones in the following way:

Table 4

Phonemes / Articulatory distinctive features (binary arranged)	i	ĩ	ε	ε̃	u	ũ	o	ɔ̃	a	ã
oral : nasal	−	+	−	+	−	+	−	+	−	+
central : non-central	+	+	+	+	+	+	+	+	−	−
front : back	−	−	−	−	+	+	+	+		
neutral : non-neutral	+	+	+	+	+	+	+	+	−	−
spread : rounded	−	−	−	−	+	+	+	+		
palatal : velar	−	−	−	−	+	+	+	+	+	+
semiopen : non-semiopen	+	+	−	−	+	+	−	−	+	+
close : open	−	−			−	−			+	+
mid : non-mid	+	+	−	−	+	+	−	−	+	+
high : low	−	−			−	−			+	+

VI. *An attempt to compare the Finnish and Polish vowel systems*

The principles which the vowel system rests on in Finnish and Polish partly differ and partly coincide. They could be subdivided in the following way:

(1) The oppositions which are peculiar to Finnish:
  (a) short vs. long
  (b) non-labialized vs. labialized;

(2) The opposition which is peculiar to Polish:
  (a) oral vs. nasal;

(3) The opposition based on the degree of supraglottal aperture coincides in Finnish and Polish in that there is a three-series scale in both languages. But Finnish semiclose vowels are more closed than Polish semiopen ones.

(4) In Finnish the horizontal position of the tongue results in a binary opposition *front* vs. *back* while in Polish there is a ternary opposition *front* vs. *central* vs. *back*. To be stressed here is the fact that in Polish there is no equivalent to Finnish /æ/ which is very open, approaching almost the aperture of /a/.

The considerable differences between the vowel systems compared above cause Polish speakers learning Finnish to face serious difficulties which emerge on the phonemic as well as on the allophonic plane. The former are consequent on the lack of oppositions: *short* vs. *long* and *rounded* vs. *unrounded* as well as on the non-distinctiveness /æ/ vs. /a/ and /æ/ vs. /ε/ in Polish. A primarily allophonic difficulty will be caused by the lack of articulatory equivalence between Finnish semiclose vowels and Polish semiopen ones. Thus Poles will tend to substitute short for long, unrounded for rounded, /ε/ or /a/ for /æ/, semiopen for semiclose.

Finns, on the other hand, will meet fewer difficulties while learning Polish. Certain pronunciation errors may originate from the existence of the opposition *oral* vs. *nasal* although in Finnish nasalization of vowels is a known phenomenon at the allophonic level. It occurs regularly in the environment of nasal consonant (Wiik 1965 : 143). In addition to this Finns may have problems in mastering the correct articulatory nature of the Polish semiopen vowels, and they will tend to substitute rounded [ü] for Polish unrounded [i].

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CONTRASTIVE STUDIES IN ENGLISH AND GERMAN INTONATION: A SURVEY[1]

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1.1 *Introductory Remarks*. A considerable portion of the analytical and descriptive work which has been carried out in the field of intonation originated from the necessity of teaching foreigners. Pike (1945) started from the problems encountered in teaching Latin-American students; the British teaching tradition with, for instance, H. E. Palmer (1922), R. Kingdon (1958), O'Connor-Arnold (1961, 1973^2) is well-known, and also von Essen (1964) and Stock-Zacharias (1972) refer to matters of language teaching. But although the same impetus might have united the studies in intonation, the theoretical position of the various analysts, and their selection and interpretation of the data resulted in a number of differences manifested in their studies. It is our aim to examine the areas of sameness and difference in some of the major works on intonation in English and German, in order to establish a *tertium comparationis* essential to any contrastive work, and in order to define those areas of research which have to be investigated if suggestions for educational aspects are to be placed on a sound scientific basis.

Reasons of space compel us to restrict our discussion to the intonational nuclei, omitting all the other parts which constitute the intonation contour of a whole utterance. A study of all the units or elements of intonation, and the rules that govern their combination, as presented by various writers on this subject, would show that all intonational analyses assume the existence of obligatory nuclei of intonation, but that they are at variance with regard to their number and to the existence, delimitation, or function of the constituents of larger units.

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1.2 *Pitch Level vs. Contour Approach*. A few preliminary remarks appear expedient with respect to the seemingly fundamental difference in approach which is linked to the descriptions of pitch movement by way of a succession of pitch levels (2–4, 3–1, etc.) or by contours or pitch envelopes (Cf. Bolinger 1951). It would appear that the two approaches are basically comparable, as Crystal (1969 : 214) points out in a discussion on a study by Trim. Nearly all the descriptions which make use of contours specify the type of contours as *high*, *low*, or *wide* and *narrow*. The same phenomena may be indicated through pitch levels, 2–4 being high or wide and 3–4 being low or narrow[2]. For both types of approach it is still an open question as to which pitch level sequences or types of contour are significant in English and belong to the intonation system (cf. Table 1: O'Connor-Arnold include two types of fall among their nuclear tones, whereas Halliday has only one, although he lists three types of fall among his secondary tones [medium, wide and narrow]). For the rest of our discussion we shall take for granted that the analysis and description of intonation systems is possible and sensible with the help of contours.

The following Table 1 exemplifies the variation as regards basic or nuclear intonation contours exhibited in the studies of different analysts, and at the same time shows that they all work on the assumption that some contours are to be counted as essential types.

2.0 *Areas for Comparison*. Generally, it would appear that the so-called *emic* and *etic* levels of language lend themselves to contrastive analysis. As with all such studies, however, the selection of phenomena is guided by insights and criteria from the functional or meaningful side of language, and therefore the respective areas will be examined first.

2.1 *The Functions of Intonation Contours*. The expression *functions of intonation contours* (Cf. O'Connor - Arnold (1973 : 4f.): "roles of intonation") is used here to indicate that intonation contours serve a purpose in the communicative speech act, which is agreed upon by all writers on this subject[3]. The assumption for contrastive analysis is that at least some of the function (or purposes) of intonation are common to several, or probably all, languages and that therefore these languages are comparable with regard to the particular ways in which the functions of intonation are realized in utterances.

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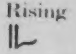
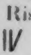
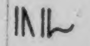
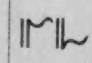
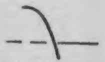
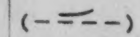
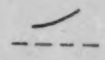
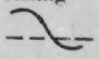
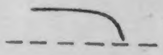
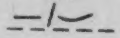
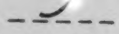
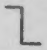
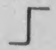
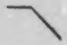
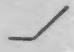
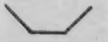
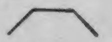
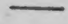
[2] Gunter (1972 : 197f.) argues explicitely for contours and against discrete pitch levels. Cf. also Pike (1945 : 20ff).

[3] The term *function* is applied to the communicative uses of intonation by various writers (e.g. Crystal 1969: 286; Stock, Zacharias 1972: 6ff., 22ff.), and we therefore propose to retain it in this rather non-technical sense. It should be kept in mind that we do not adopt this term from any specific theory.

Table 1

Analyst	Basic Contours (Nuclei)								
O'Connor-Arnold	Low Fall ˎNo	High Fall ˋNo	Low Rise ˏNo	High Rise ˊNo	Fall-Rise ˇNo	Rise-Fall ^No	Mid-Level ›No		
Pike	°2-4	°2-3	°3-2		°2-4-3				
Halliday	(1) Falling 		(3) Low Rising 	(2) High Rising  Falling-Rising (pointed) 	(4) Falling Rising (rounded) 	(5) Rising Falling (rounded) 		(1+3) 	(5+3) 
Gunter	Falling 		Low Rising 	High Rising 	Falling-Rising 				
v. Essen	Terminaler Typ 		Progredienter Typ 	Interrogativer Typ 					
Isačenko-Schädlich	Fall 		Rise 						
Stock-Zacharias	kontinuierlich fallend 	Tonbruch fallend 	kontinuierlich steigend 	Tonbruch steigend 	doppelter Tonbruch fallend-tieftonig-steigend 	doppelter Tonbruch steigend-hochtonig-fallend 	kontinuierlich schwebend 		

The first type of function which we would like to distinguish is often labelled grammatical (or functional, structural) meaning of intonation. We prefer the term ***discourse function of intonation contours***, since certain contours in conjunction with pauses can be employed to divide a longer stretch of speech into smaller units not necessarily corresponding to grammatically defined units, with the type of nuclear contour indicating either finality or non-finality of the respective unit. Thus, for instance, Delattre *et al.* (1965) distinguish between contours signalling finality and non-finality with German declarative sentences (the latter being subdivided into major and minor continuation). Halliday (1970 : 23) suggests a similarly twofold division between a basically falling and a basically rising type of contour: the former signals 'certainty', the latter 'uncertainty' (cf. also Crystal 1969:201 ff.). Isačenko-Schädlich (1970) also work with two (invariant) tone switches: a rising tone switch indicates that a fall is to follow, while a falling tone switch, according to them, is unmarked with regard to the type of switch which may follow. Although the three examples quoted are certainly not comparable in all their assumptions and results, they suggest that the indication of finality vs. non-finality is indeed a discourse function of intonation which may be used for comparison: a speaker is able to indicate by means of intonation which parts of his utterance he considers separable and which final or non-final. The question still unanswered is in what ways the above-mentioned nuclear contours and pause, for instance, interlock in the realisation of those functions.[4]

Gunter (1972) discusses a function of intonation contours which appears to belong to the discourse functions, but is perhaps more directly related to the semantics of the discourse than finality, non-finality and the signalling of separable units. Gunter labels the phenomenon ***relevance***, which the following examples may help to clarify (Gunter 1972 : 200 f.):

(1) Context : ***Who is in the house?***
Response : *3 JOHN 1* ↓ (Relevance : ***Answer to information question***)

(2) Context : ***John is in the house.***
Response : *3 JOHN 3* ↑ (Relevance : ***Reclamation***)

(3) Context : ***John drank Wine.***
Response : *3 TEA 1* ↓ (Relevance : ***Contradiction***)

Gunter's hypothesis is that there are four intonation contours of the same gross shape (Falling, Low-Rising, High-Rising, Falling-Rising; cf. Table 1) and that different realisations which keep within these gross shapes keep the relevance between context and response constant whereas a shift from one gross shape to the other changes the relevance. The obvious problem is that there may be as many types of relevance as there are contexts and appropriate responses. To determine and perhaps classify contexts and responses is still a task to be solved. In other words, Gunter illustrates a discourse function without analysing its optionality or its conditions of occurrence in any detail. The second type of function may be called the syntactic function of intonation contours.

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[4] Crystal (1969:172–176) contains information on the "co-occurrence of prosodic systems" like pitch-range, tempo, loudness, rhythmicality, but does not mention pause in this connection. Wode (1966:194f.) only sporadically mentions correlations between his "components of intonation" (pause, accent, pitch).

It is a well-known fact that neither in English nor in German is there a strict one-to-one correspondence between syntactic structure and type of intonation contour (cf. e.g. Halliday 1967 : 19). Only in one or two instances does the correlation between structure and contour approach an exclusive co-occurrence relation, as has been pointed out for the *High Rise*: according to O'Connor-Arnold (1973 : 75) this contour is normally used for questioning; Halliday (1970 : 26) states that the *High Rise* is the neutral contour for yes/no-questions, whereas a fall is the neutral one for all other types of sentence.

However, although no strict correspondence between syntactic structure and intonation contours seems to exist, it has nevertheless been discovered that actually occurring correspondences vary considerably with respect to the frequency of occurrence. Quirk *et al.* (1964 : 680) prove a certain strength of correlation between names and *Rises*, adverbs and *Rise-Falls*, "premodifying adjectives in fall-plus-rise units" and *Falls*, pronoun subjects and the *Fall* of *Fall-plus-Rises.*[5]

Only brief mention is to be made of a third function of intonation nuclei which seems to be linked directly to the information structure of sentences (in Halliday's sense, cf. Halliday 1967 : 33f.; 1967a/68: 200 f.), and which again has been investigated *in extenso* by Quirk *et al.* (1964). It is shown there that except for a small set of particular sentence types, the intonation nucleus coincides considerably more often with nominal than with verbal constituents (Quirk 1964: §19). The two questions of correlation between type of intonation contour and syntactic/lexical material in the utterance, and of position of the nucleus in the utterance, providing the distinction between neutral and emphatic[6], can perhaps be grouped together under the function of information structure, although the links with the syntactic function and the discourse functions are apparent.

The fourth type of function concerns the attitudinal expression of speakers signalled by means of intonation. A large amount of data has been accumulated to illustrate this function of intonation, usually for the purpose of teaching

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[5] Cf. also Wode (1966 : 193–199) for a few hints concerning this matter of correspondence, and Crystal (1969 : 253ff.), Halliday (1967 : 24ff., 35ff.).

[6] Cf. Wode's fundamental distinction between normal and emphatic intonation (1966: 212f.).

English (cf. O'Connor-Arnold 1973 : chap. 2; Pike 1945 : chap. 4; Halliday 1970 : chap. 4).

The material adduced to exemplify speakers' attitudes usually suffers from a considerable degree of subjectiveness with which it is collected, and secondly from neglecting to take into account the linguistic and situational context explicitly (cf. however, Stock - Zacharias 1972:19). However, subjectiveness may be overcome by applying the technique of the semantic differential to the attitudinal dimension of intonation as has been demonstrated by Uldall (1964). One might also mention research in progress at University College London, aimed at finding out by means of a similar technique, whether particular intonation contours express particular attitudes by themselves (without any specifiable linguistic context), which is denied by certain writers on intonation. For the time being, the correspondences between context (linguistic and situational), and the attitudinal function of intonation still remain very much in need of clarification.

2.2 *Linguistic and Situational Context*. Although all the textbooks on intonation make use of both types of context, a classification and explicit correlation between context and intonation contour is still missing. Both the independence (4a, b) and dependence (5a, b) of an intonation contour in relation to some linguistic context has frequently been illustrated (e.g. Gunter 1972: 205):

(4) (a) He's at home. (Statement)
(b) He's at home? (Question)
(5) (a) Context : John drank tea
Response : *3 TEA 1* ↓ (Relevance : *Recapitulation*)
(b) Context : John drank tea
Response : *3 WINE 1* ↓ (Relevance : *Contradiction*)

Both types of context in relation to intonation are waiting for further investigation.

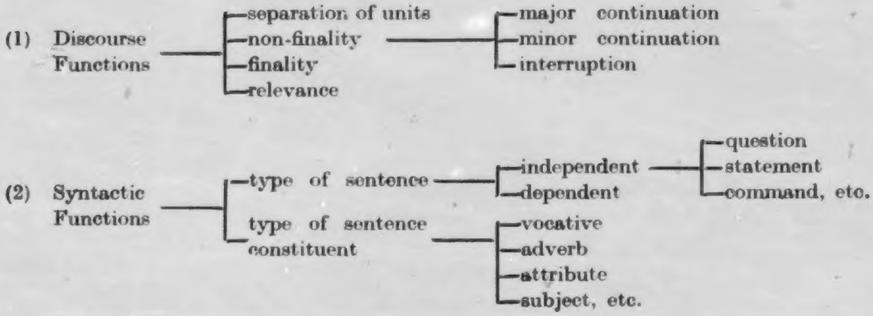
2.3 *Phonic Substance*. In principle there does not seem to be any doubt about the phonic substance, i.e. the changing fundamental frequency, of the *Falls*, *Rises*, etc. which are listed in the description of English or German intonation. But very few studies appear to have occupied themselves with establishing the exact minimal frequency ranges that would qualify as a particular intonation contour. Kuhlmann (1952:200 f.) points out that the pitch movement of German sentences occurs within a larger range of semitones than of English ones. Isačenko-Schädlich, on the other hand, experimented with a pitch difference of one semitone and found this interval sufficient to characterise typical German intonation contours (1970 : 57 f.). (But although the interval of one semitone may be sufficient to identify a few intonation contours, it seems that more phonic details have to be included in order to make speech acceptable to native speakers). On the whole it would appear to be necessary to determine not only auditively, but also instrumentally or experimentally the relative frequency limits of the various contours. This might also throw some light on the reasons for the differing selections of contours by different analysts, as exemplified in Table 1, and in particular on the significance of the various "phonetic" details which Halliday presents in the symbolisation of his primary (nuclear) contour (2) (falling-rising, *pointed*) and contours (4) and (5) (specified as *rounded*). Also the whole gamut of paralinguistic features (cf. Crystal-Quirk 1964, Crystal 1969:132 ff.) seems to belong to this area of possible contrasts between languages.

2.4 *Frequency of Occurrence*. Pike (1945) contains a statistical analysis, on the basis of a few text samples read by himself and his wife, of the intonation contours which constitute his system. The contours which are listed in Table 1 occur most frequently among those of their type, i.e. °2–4 represents 19.8% of the contours falling to Pike's level 4, °2–3 occurs in 17.1% of all contours falling to level 3, °3–2 covers 6.4% of the contours rising to level 2, and °2–4–3 comprises 10.2% of all fall-rises (1945:157 f.). Pike's analysis surely is a step in the right direction, but since his material (passages from Sherlock Holmes) can hardly be called representative, his results have to be considered as preliminary. An analysis of the frequency of occurrence of specified nuclear tones and a correlation of the distributional pattern of contours with types of spoken texts is still a task to be undertaken.

The following Table 2 presents a schematic summary of those areas of intonation which we explained above, and perhaps contains all the general areas of intonation which may be the object of contrastive analysis. It should be kept in mind, however, that any of the possible interrelationships between intonation contours and stress (intensity), loudness (amplitude), pause, etc. are omitted here, as well as further possible subdivisions towards the right of the Table.

Table 2

Areas for Comparison


(1) Discourse Functions
separation of units
non-finality
finality
relevance
major continuation
minor continuation
interruption
(2) Syntactic Functions
type of sentence
type of sentence constituent
independent
dependent
question
statement
command, etc.
vocative
adverb
attribute
subject, etc.

(3) Information-structural Functions
- placement of nucleus
  - neutral
  - emphatic
- correlation with syntactic/lexical material
  - nominal
  - verbal, etc.

(4) Attitudinal Functions
- neutral
- involved, etc.

(5) Context
- linguistic
- situational

(6) Phonic Substance
- frequency range of contours
- shape of contours
- paralinguistic features, etc.

(7) Frequency of Occurrence
- type of text A
  - type of contour a
  - type of contour b
- type of text B
  - type of contour a
  - type of contour b

3.0 *Contrastive Work on Intonation*. On the whole very little detailed information is as yet available on the intonation contrasts between English and German. If one considers the various general areas of comparison established in Table 2, it has to be admitted that, according to our knowledge, no contrastive analysis is yet possible of the syntactic function (related to sentence constituents), information-structural function, attitudinal function, context, and frequency of occurrence, because there is not sufficient information available either for German or for English, or both.

As regards *discourse functions*, Delattre *et al.* (1965) demonstrate the following distribution of contour types with respect to *finality/non-finality*:

Finality
- in German : Falling contour
- in English : Falling contour

Non-Finality
- in German : Rising contour
- in English : Falling contour

In English the pitch range of the fall differs for the two functions, according to Delattre *et al.* (1965), namely lower for finality than for non-finality.

The phenomenon of *relevance* can be illustrated for both languages:

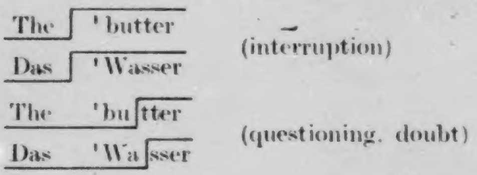
John drank ˋwine. — ˋTea! (Contradiction)
John is at ˋhome. — At ˊhome? (Reclamation)

Das ist `Wein — `Wasser! (Contradiction)
Der Wein ist `gut — ´Gut! (Reclamation)

But it is still impossible to formulate any generalisations for the languages themselves or their comparison.

The distinction between *major* and *minor continuation* is said to be clearer in German than in English (Delattre *et al.* 1965:154), but this feature seems to be in need of further analysis, especially in regard to its correlation with certain intonation contours and the concept of juncture and pause.

Interruption, too, is at least partially identical in both English and German. Isačenko-Schädlich (1970: 38 f.) show how a rising tone-switch is interpreted as interruption if it occurs before the ictus (stressed syllable), while a question or doubt is expressed by a rise after the ictus. They do not mention one essential feature, however, which has to be present for the signalling of interruption, namely that the contour has to remain level after the rise. Compare the following examples for English and German:

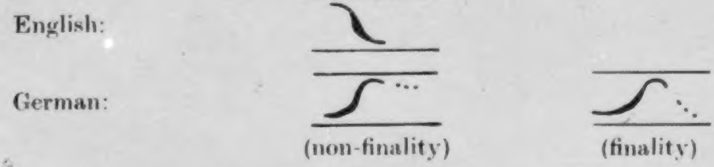


The text-book example for *syntactic functions* of intonation contours, the differentiation of statements from questions holds true for both languages we are concerned with:

He's at `home. — He's at ´home?
Er ist zu `Hause. — Er ist zu ´Hause?

But apart from such very general, and perhaps very superficial correspondences, little material seems to exist on correlations between constituent type and intonation contour for German (cf. Wode 1966: 193–199) which could be compared with the results of Quirk *et al.* (1964). Neither is there any material on dependent clauses.

As regards the area of *phonic substance*, it has to be stated again that much more information is available on English, as was pointed out above (§ 2.3), than on German. Some interesting comparisons are provided by Delattre *et al.* (1965), who confirm the rule of thumb that the general form of English intonation is wave-like whereas German can be compared to the blade of a saw (Delattre *et al* 1965: 148; cf. Scherer-Wollmann 1972: 256 f.) because of its pitch drops. They use the picture of a bird in order to illustrate the basic differences in the details of the intonation contours between English and German: for English, the "bird" is looking to the left with the area of greatest intensity following the highest pitch (the "head"); for German the "bird" is looking to the right, with the greatest area of intensity preceding the highest pitch. In addition to these differences Delattre *et al.* point out another detail for German: the "beak" of the "bird" points upwards or stays level for non-finality but points downwards for finality. Compare the following diagrams:



4.0 *Summary*. Our assumption is that the general areas for comparison contained in Table 2 present an exhaustive list of such areas and that they all play a role in the functioning of both English and German intonation. For most of these areas contrastive analysis or any analysis at all has not even begun. We hope that the contrastive studies which exist can be placed within the above schema, as for instance Schubiger's study (1965) can be allocated to the attitudinal functions, and that our remarks might provide a useful outline for further research.

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THE FEATURE "SYLLABIC" IN RESONANTS AND SEMIVOWELS

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From Awedyk's (1976) reassignment of the features Consonantal, Vocalic and Syllabic it follows that

(a) there is always a polar opposition (non-identity) of the features Consonantal and Vocalic, viz. all consonants (including stops, spirants, resonants and semivolwes) are [+consonantal, −vocalic], while vowels are [−consonantal, +vocalic];

(b) as regards the feature Syllabic, vowels are always [+syllabic], stops and semivowels [−syllabic], spirants also usually [−syllabic] (though sometimes [+syllabic]), resonants either [+syllabic] or [−syllabic].

The feature Syllabic is rightly described as a *functional* feature, and as such to be kept clearly apart from inherent features of articulation. However, the feature Syllabic has to be extended, namely by the feature Peak. Resonants (and spirants) when [+syllabic] are always [+peak]. With vowels, only /a/ is always [+syllabic, +peak]; other vowels can be both [+peak] or [−peak]: the more open segment of the diphthong being marked [+peak], unless the principle is changed by some other factor, such as e.g. stress. Diphthongs are, in these terms, defined as combinations of two vocalic segments, one of which is marked [+syllabic, +peak], the other [+syllabic, −peak].

Now, it seems that the system of features becomes unnecessarily complicated this way, and could be simplified, if handled differently.

First of all, if the features Consonantal and Vocalic are always opposed, i.e., [α consonantal, β vocalic] for any segment class, then one of them is clearly redundant and can be dispensed with, the classes being defined equally well by only one of those features and the feature Syllabic. Since, however, the feature Syllabic is of a different type (functional rather than inherent), a better solution seems to be to drop the feature Syllabic altogether, while changing the assignment of the features Consonantal and Vocalic as follows:

stops and spirants [+consonantal, —vocalic],

vowels [—consonantal, +vocalic],

resonants and semivowels [+consonantal, +vocalic], cf. e.g. the treatment of liquids in Jakobson, Fant and Halle (1952:19).

The above assignment differs from Awedyk's in that the resonants and and semivowels are marked [+vocalic]. As a result we get three distinct classes:

(1) the class of true consonants (obstruents, turbulents)—the only class marked [—vocalic],

(2) the class of vowels—the only class marked [—consonant],

(3) the intermediate (opalescent) class of resonants (sonorants), which includes semivowels.

The true consonant class and the vowel class are by no means unnatural classes: they are each characterized by other features as well; e.g., the consonant class is otherwise marked off by the functional opposition of voice, the vowel class is characterized by [+voice] feature. But the most important thing is that they are at the same time *functional* classes in terms of syllable structure: consonants are non-syllabic, while vowels are syllabic, in a syllable. In this way the feature Syllabic may become redundant.

As regards the third class, that of resonants, it is intermediate between the other two classes (consonants and vowels), both phonetically, and, which is most important, *functionally*. The resonants can be both non-syllabic and syllabic, depending on the (phonetic) context. This is true also of the semivowels which should therefore be included in this class.

The resonant class can be represented as two iso-functional series

(1) m n r l y w
(2) m̩ n̩ r̩ l̩ i u

The first series is non-syllabic, the second syllabic. It is particularly important to realize that the functional relationship of, say, (the semivowel) [w] to (the high vowel) [u] is exactly the same as that of, say, [r] to (syllabic) [r̩], despite differences in notation.

One may, of course, distinguish certain subclasses within the general resonant class, e.g., the semivowels which are phonetically "more vocalic" than e.g. the nasals (which are more "consonantal"), but functionally all are identical, the main (primary) function of the whole class being non-syllabic (=series 1).

The main non-syllabic function follows from the criterion of distribution (cf. Kuryłowicz 1948: note 22). Let T denote any consonant, E—any vowel, R—any member of the resonant class.

Between two vowels, or between a vowel and zero sound (or *vice versa*), the resonants are non-syllabic: ERE, ER, RE.

Between two consonants, or between a consonant and zero, the resonants are syllabic: TR̩T, R̩T TR̩(Skt. dātr̩nē, OE bearu).

But in the mixed contexts of vocalic and consonantal entourage the resonants are non-syllabic, too: TRE, ERT (Skt. dātrē, OE bearwes), this, then, being decisive for their primary (unmarked) non-syllabic function. In other words, resonants become syllabic (marked, secondary function) only if not vowel adherent.

Parallel to the fact that the resonant class can be phonetically subdivided into "more vocalic" and "more consonantal" subclasses, there may also be functional subdivisions in the (mixed) contexts: in the (onset) TRE context the resonants are "more consonantal" than in the (coda) ERT context, where they are "more vocalic", in other words, in TRE they belong to the preceding consonant (syllable margin), in ERT—to the preceding vowel (syllable peak), cf. e.g., voicelessness or friction in the former case, and vowel colouring, diphthongization, or nasalization in the latter.

Awedyk's remark as to the vowel /a/ being always [+syllabic, +peak] can be extended to cover other non-high vowels, i.e., /e, o/. On the other hand, English /ə/ can be regarded as a non-low vowel, and aligned with /i, u/. This explains the "shakiness" of such English diphthongs as e.g. /iə, uə/ but not e.g. /ei, oi/.

The problem with Polish /r/ in *krwi* (/l/ in *lnu*, etc.) is that in Polish (similarly as in Russian), there is no separate ambivalent functional class of resonants: /r/ and /l/ are true consonants, i.e., [+consonantal, −vocalic], and incapable of syllabic function. Unlike in English, they are not vocalized in pre-consonantal or final position (e.g. *park, teatr*). Like other consonants, they can e.g. be palatalized (cf. also alternations *l*∼*l*, *r*∼*rz*). As true consonants, they enter consonant clusters, which are generally freer than English clusters. But in English, too, clusters of true consonants are quite common which do not obey the sonority principle, cf. initial /sp-, st-, sk-/, final /-ps, -ts, -ks/.

Similarly with the semivowels: in Polish /j/ is a full consonant, cf. also consonantal functional values of both Polish *w* and *l*. The analysis of Polish *maj* and English *my* will be, respectively:

Polish:

$$\begin{array}{ccc} /\mathrm{m} & \mathrm{a} & \mathrm{j}/ \\ \begin{bmatrix} +\text{consonantal} \\ -\text{vocalic} \\ \text{Fx} \end{bmatrix} & \begin{bmatrix} -\text{consonantal} \\ +\text{vocalic} \\ \text{Fx} \end{bmatrix} & \begin{bmatrix} +\text{consonantal} \\ -\text{vocalic} \\ \text{Fx} \end{bmatrix} \end{array}$$

English:

$$\begin{array}{ccc} /\mathrm{m} & \mathrm{a} & \mathrm{i}/ \\ \begin{bmatrix} +\textit{consonantal} \\ +\text{vocalic} \\ \quad \text{Fx} \end{bmatrix} & \begin{bmatrix} -\textit{consonantal} \\ +\text{vocalic} \\ \quad \text{Fx} \end{bmatrix} & \begin{bmatrix} +\textit{consonantal} \\ +\text{vocalic} \\ \quad \text{Fx} \end{bmatrix} \end{array}$$

The difference between the Polish and English sequences above can, then, be due to the fact that in Polish there are no segments marked [+consonantal, +vocalic], i.e., no resonants. Note, that in Awedyk's scheme the specified features of Polish /j/ were identical with those of /m/, i.e., in both cases typical of consonants. But now the features Syllabic and Peak are both disposed of. In this way there is no mix-up of inherent and functional features which seems as undesirable in phonology as mixing up semantic and syntactic criteria in grammar.

Finally, it may be added that in English there exists also the combination of features [−consonantal, −vocalic] which characterizes the aspirate /h/. Polish /h/ (*h*, *ch*) is, of course, again purely consonantal, i.e., [+consonantal, −vocalic]. The systemic difference between Polish and English in this respect, then, seems to be that in Polish there is only a two-term opposition of consonants vs. vowels, while in English there is a four-term system of segment classes: consonants, vowels, resonants, and /h/.

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SOME REMARKS ON GENERATIVE CONTRASTIVE PHONOLOGY

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0.0. In contrastive studies as well as in any other field the choice of a model on which the research is based is essential. In this article I shall briefly discuss some of the theoretical assumptions of generative phonology summarized by Chomsky and Halle (1968) and then apply their model to an important problem in Polish-English contrastive studies. Those assumptions have remained essentially unchanged and generative phonologists concentrated on minor problems rather such as notational conventions to make their rules look concise, pretty, and elegant (Kim 1971 : 76). Even Hill and Nessly (1973) in their review of *The sound pattern of English* do not concentrate on the theoretical basis. In such a situation a number of pseudo-problems have arisen, e.g., what should be the underlying representation of the Russian form *čas* "hour" /kēs/, /čēs/, or /čās/? (Lightner 1971: 522–523). This was a natural consequence of the underlying representation model.

1.0. Although Chomsky and Halle's model has some advantages over the traditional approaches (for discussion see Kiparsky 1968), available data should not be ignored, i.e., formalism and simplicity must not be more important that attested language forms. In their list of English vocalic segments Chomsky and Halle give only monophthongs (1968:176) from which they derive all diphthongs on the phonetic representation level. They also derive [ɔ̄y] from some /ǣ/, which is against all we know about the history of English. This diphthong was borrowed during the Middle English period and though its quality is not certain (cp. *puint*/*point* (Fisiak 1968 : 54–55)), it has never been a monophthong. Chomsky and Halle (1968 : 19) offer the following explanation: "Hence the lexical redundancy rules will be much simplified if we can represent [ɔ̄y], too, as a monophthong V^* on the lexical level". The whole paragraph 4.3.3. (1968 : 191–192) is a perfect example of a hocus pocus analysis.

Let us consider the following hypothetical model. One may not recognize diphthongs as "deep structure" units and maintain that in the brain there are only monophthongs. Diphthongs appear therefore only on the level of actual articulation. In other words, diphthongs are in the mouth of the speaker, not in his brain. Then the procedure proposed by Chomsky and Halle would fit the model, which remains internally consistent. But when Chomsky and Halle recognize the existence of diphthongs but do not introduce them to the underlying representation because it would spoil the rules, then, in my opinion, linguistic science is being forsaken.

1.1. Formalism is equally dangerous in diachronic linguistics. Discussing the First Sound Shift Voyles (1967) formulates a number of ordered rules which generate neatly the Proto-Germanic system from the Proto-Indo-European system. Voyles tries to give the impression that he pays attention to relative chronology, i.e., the order in which his rules apply agrees with the historical ordering of the changes. In his use of authorities on the subject, Voyles chooses at random: he accepts or rejects the opinion of the same linguist as it suits him. This is a methodological drawback: the First Sound Shift was not merely a series of changes — it should be rather viewed as a process during which one system changed into another. Therefore one must either accept one linguist's theory of the relative chronology of the change or reject it entirely

The relative chronology is not, however, Voyles' main concern, he is interested in the rules themselves: "If one puts Rule 5 anywhere before Verner's Law, that rule is increased by one feature" (1967 : 646), and: "The rules are greatly complicated if one assumes a change of IE *p* to labiodental *f* at the same time as *t* becomes *þ*, etc." (1967 : 654). Such an approach deprives generative phonology of the explanatory value, the lack of which the followers of this model criticize in other schools.

1.2. A new trend in American phonology, the so-called" natural phonology", turns back to the older European tradition, which combines a structural description of the data with explanatory adequacy (cf. Zabrocki 1960, 1961). For example, Stampe (1972:581) rediscovers such natural laws of diphthongization as: "Diphthongization ... is therefore to be understood as a polarization of color"

2.0. The existence of the phonemic level is one of the central problems in generative phonology. Chomsky and Halle deny the existence of the phoneme and the phonemic level since these have not been demonstrated (1968 : 11). The developments in neurophonetics seem to support their view (Koževnikov and Čistovič 1965, Ohala 1970). Such experiments point out that the smallest unit both of speech production and speech perception is the syllable, or perhaps the word ("deep structure" word?). Spoonerisms like *Calaverie → Cavalerie* (Kim 1971 : 54) show that information about the following syllable is sent simultaneously with the command to pronounce the preceding syllable. It has not yet been convincingly demonstrated whether the neural command sent off by the brain says: pronounce /tu/, or pronounce /t+u/. In perception we still do not know for certain by what feature(s) we distinguish, for example, /d/ and /t/: aspiration, voicing, or tenseness. The brain must, however, store some knowledge about the units of production to send off the right command and the units of perception to identify then correctly (cp. Baudouin de Courtenay's 1910 concept of kinema and akusma). These units must be identical in order to speak and understand a language.

2.1. Thus it becomes extremely important that we be able to identify just those features by which units are identified. Chomsky and Halle's features do not seem to be universal, and they are also "surface" features not essentially different from those proposed by traditional phoneticians and phonologists. An example of a "deeper" feature (perhaps THE feature) was given by Maran (1971), who proposed four glottal features (raised, lowered, spread, and constricted) dispensing with voicing and pressure.

The specification of bilabial stops of various types in terms of glottal features (Kim 1971:98).

	aspirated	partially voiced	implosive	unaspirated	ejective	lax	creaky	voiced aspir.	fully voiced
	[p^h]	Eng. initial [b]	[b]	Fr. [p]	[p']	Kor. [p*]	Hausa [ʔb]	[b^h]	Fr.
raised	+	–	–	+	+	–	–	–	–
lowered	–	–	+	–	–	–	–	+	+
spread	+	–	–	–	–	+	–	+	–
constricted	–	–	+	–	+	–	+	–	–

Chomsky and Halle have many difficulties in dealing with what have been traditionally called semivowels and resonants. They try to escape these difficulties by introducing the feature Syllabic (Chomsky and Halle 1968 : 354). But they obscured the problem even more (for details see paragraph 4): the feature Syllabic is not universal, and, moreover, it is a functional feature which should be kept apart from such inherent features as Low, Back, etc. How can it be explained within the framework of Chomsky and Halle's model that the sequence [krvi] "blood" Gen. Sg. is dissyllabic in Serbo-Croatian and the sequence [krfi] is monosyllabic in Polish (cp. Standard Ukrainian *kryvavyj*, Carpathian Ukrainian *kyrvavyj* (Andersen 1972 : 33)). Here stress plays an important role: in Serbo-Croatian the [r] in [krvi] is stressed, in Polish it is not (Abele 1924–5).

One must admit, then, that each language has its specific features or, better, that each language chooses only some features out of a number of universal features. These, however, are still to be found.

2.2. Let us consider another example. Chomsky and Halle (1968 : 177) do not distinguish between the [t] in *ten* and the [t] in *try*, they have one segment /t/. Yet they will have to consider the problem of retroflexives in Norwegian, where /t d l n/ and /ṭ ḍ ḷ ṇ/ seem to constitute different segments, e.g., /kat/ *katt* "cat": /kaṭ/ *kart* "map", /fa:t/ *fat* "dish" : /fa:ṭ/ *fart* "travelled" PP (Vogt 1939). In order to take care of the two different *t*'s in the English formus *ten* and *try*, Chomsky and Halle will have to provide rules which specify their pronunciation, i.e., phonetic representation. Such rules will surely not differ much from traditional phonemic analysis.

2.3. Moreover, the results at which generative phonologists arrive are practically the same as those achieved by traditional phonologists, e.g., Chomsky and Halle's list of English consonantal segments (for vocalic segments see 1.0.) differs from traditionalits' consonant phoneme inventory in only one respect, namely, Chomsky and Halle (1968 : 177) distinguish /x x^w k^w g^w/. On this point they are difficult to follow: "... labialized (rounded) consonants are interpreted as sequences [kw], [gw], and [xw], ... (1968 : 223). Is then /k^w/ one segment or a sequence of segments? — /w/ is given a separate segment in their list (1968 : 167). What is then the difference between the [w] derived from /w/ and the [w] of /k^w g^w x^w/? Here Chomsky and Halle become victims of their own model.

3.0. Binary notation is another important issue in generative phonology. It does not always happen that language segments are clearly marked by plus or minus signs (cp. multi-valued feature system proposed by Ladefoged (1967, 1971), Fant (1969), Morin (1971)). More often we have to do with the intensity of a feature, e.g., syllabicity. Vowels are syllabic in all languages, resonants are regularly syllabic only in some languages, and even spirants may be regularly syllabic like in Bella Coola (Greenberg 1962) or in Eastern Sudanic languages (Tucker 1940). Similarly, vowels are not only either short or long, in some languages three levels are distinguished: short, half-long, and long (Cimochowski 1949). Thus the assignment of plus or minus signs is not always unarbitrary (cf. Pak 1972 : 34–35).

4.0. The application of Chomsky and Halle's model in contrastive studies involves a number of difficulties and sometimes makes such comparison fruitless.

Let us consider Polish and English sequences of the type: Polish *maj* "May" and *bał* (*się*) "he was afraid" : English *my* and *bow*. These sequences are to be treated as identical on the phonetic representation level, apart, of course, from the differences in the place of articulation of the Polish and English segments. The fact that English *my* and *bow* are derived the underlying representations /mī/ and /bū/, respectively, does not explain the difference at all. The difficulty springs both from the wrong assignment of features and the rejection of diphthongs on the underlying representation level.

4.1. /w/ and /y/ should be marked as [+consonantal, −syllabic]; they are consonants because both are narrower than /i/, which marks the boundary (arbitrary or not) between two classes of sounds: vowels and consonants. It is true that in some contexts /w/ and /y/ become vowels, i.e., they change into /u/ and /i/, respectively, e.g., OE *bearu* "grove" ← **barw-* (cp. *bearwes* Gen. Sg.). But the same process is characteristic of liquid and nasal consonants, e.g., Skt. *dātrḗ* Dat. Sg. Masc. from *dātā́* "one who gives": *dātṛ́nē* Dat. Sg. Neutr. Why then should /w/ and /y/ be marked [−consonantal, −syllabic] and syllabic and nasal consonants [+consonantal, +syllabic]? (Chomsky and Halle 1968:354). I propose the following reassignment of the features in question:

(1) Stops (with instantaneous and delayed release): [+consonantal, −vocalic, ... Fx ... −syllabic]
(2) Spirants: [+consonantal, −vocalic, ... Fx ...−syllabic (+syllabic)]
(3) Resonants: [+consonantal, −vocalic, ... Fx ... ±syllabic]
(4) Semivowels: [+consonantal, −vocalic, ... Fx ... −syllabic]
(5) Vowels: [−consonantal, +vocalic, ... Fx ... +syllabic]

Fx stands for other features of articulation. The feature Syllabic is a functional feature and as such must be kept clearly apart from inherent features of articulation.

The feature Syllabic has to be extended, namely, by the feature Peak. Resonants (and spirants) when marked [+syllabic] are always [+peak]. With vowels the problem is different, and only /a/ is always [+syllabic, +peak] Other vowels can be both [+peak] and [−peak], e.g., in the English form *pit* /i/ is marked [+syllabic, +peak] while in the form *buy* (as the second element of the diphthong) it will be marked [+syllabic, −peak]. The feature Peak is directly connected with the degree of opening of the vocal tract; the principle is that the more open segment is marked [+peak]. Sometimes, however, other factors can change this principle, e.g., stress. In the English diphthong /iə/ the feature [+peak] is attached to the first less open element because of stress placement. This discrepancy between the [+peak] function and the degree of opening often causes the change of /iə/ into /jə/, i.e., the more open element becomes [+syllabic, +peak] since /j/ is marked [−syllabic].

4.2. Let us consider again Polish *maj* and English *my*. They may be marked as follows:

$$\begin{array}{llll}
\text{Polish:} & /\text{m} & \text{a} & \text{j}/ \\
 & \begin{bmatrix} +\text{consonantal} \\ -\text{vocalic} \\ \text{Fx} \\ -\text{syllabic} \end{bmatrix} & \begin{bmatrix} -\text{consonantal} \\ +\text{vocalic} \\ \text{Fx} \\ +\text{syllabic} \\ +\text{peak} \end{bmatrix} & \begin{bmatrix} +\text{consonantal} \\ -\text{vocalic} \\ \text{Fx} \\ -\text{syllabic} \end{bmatrix}
\end{array}$$

$$\begin{array}{llll}
\text{English:} & /\text{m} & \text{a} & \text{i}/ \\
 & \begin{bmatrix} +\text{consonantal} \\ -\text{vocalic} \\ \text{Fx} \\ -\text{syllabic} \end{bmatrix} & \begin{bmatrix} -\text{consonantal} \\ +\text{vocalic} \\ \text{Fx} \\ +\text{syllabic} \\ +\text{peak} \end{bmatrix} & \begin{bmatrix} -\text{consonantal} \\ +\text{vocalic} \\ \text{Fx} \\ +\text{syllabic} \\ -\text{peak} \end{bmatrix}
\end{array}$$

The above brings us to the definition of the diphthong as a combination of two vocalic segments, one which is marked [+syllabic, +peak], the other [+syllabic, −peak]. Now the difference between these Polish and English sequences is quite clear: in Polish there are no segments marked [+syllabic, −peak] and hence there are no diphthongs. On the other hand, English has segments marked [+syllabic, −peak] and hence it has diphthongs.

4.3. The solution proposed in 4.2. is possible even within the framework of Chomsky and Halle's (1968) model. The feature Peak may be also introduced in the form of feature redundancy rules proposed by Vennemann and Ladefoged (1973). I feel, however, that the introduction of diphthongs to the underlying representation level would certainly add to the explanatory adequacy of the model even though rules may become more complicated. Anyway, in its present form Chomsky and Halle's model can hardly be applied to contrastive studies.

5.0. In the article I tried to show that the advantages of generative phonology over traditional phonemics in synchronic, diachronic, and comparative studies are not so obvious as often believed. It should be remembered that Chomsky and Halle's criticism of phonemic theory and phonemic analysis concerns first of all the American school, which represented the extreme pole; some of European phoneme theories are more "acceptable" (cf. Zabrocki 1962; Kortland 1973). Those critical remarks, however, do not automatically put the author of this article on the side of traditionalists in phonemics. I intended only to indicate the weak points of generative phonology. Chomsky and Halle (1968: 400) admit that "the entire discussion of phonology in this book (i.e., *The sound pattern of English*) suffers from a fundamental theoretical inadequacy". This modest statement, is, unfortunately, true.

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* The list does not include a number of works in the field, since their theoretical assumptions are essentially the same as those of Chomsky and Halle (1968). For an extensive bibliography of works on generative phonology see Kiparsky, P. 1971. "Historical Linguistics". In Dingwall, W. O. (ed.). 1971. 576–642.

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THE RELEVANCE OF THE NOTION "BASIS OF ARTICULATION" TO CONTRASTIVE PHONETICS

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For the purposes of this paper the following definition of the "basis of articulation" (called also "articulation basis" or "base") will be adopted: ***the system of characteristic articulatory movements of a given language that confer upon it its general phonetic aspect*** (Chomsky and Halle 1968:295, after Marouzeau 1943:38).

To justify the incorporating of the notion into contrastive analysis on the phonological plane I shall attempt to demonstrate that:

1. contrastive (pedagogical) analyses which do not account for differences between the articulation bases of the languages compared, i.e. do not include descriptions and comparisons of those composite articulatory actions in their *totality*, do not capture an important aspect of the differences in the phonetic nature of the languages and are, therefore, incomplete;

2. teaching programmes based on such incomplete contrastive analyses cannot assure a fully satisfactory mastery of the target language pronunciation (Honikman 1964 : 74) says in this context: "... where two languages are disparate in articulatory setting, it is not possible completely to master the pronunciation of one whilst maintaining the articulatory setting of the other".);

3. the acquisition of the articulation basis of the target language constitues an important step towards eliminating "foreign accent". (Indeed, it can be learnt by an average learner in a very short time, which, in view of the general emphasis on cost effectiveness, cannot be disregarded).

None of the above claims can be proved unless a definition is given of the set of parameters from which descriptions of articulation bases are generalized In order to abstract, as it were, those parameters from the phonetic substance of languages let us start by examining the pedagogical situation, the argument for such procedure being that. through the elimination of factors that are included in any standard contrastive treatment of the pronunciation of a foreign language, it is possible to arrive at that residue which had best be discussed under the general heading of the basis of articulation. The "standard" approach appears to be based on phonemic analysis and the ensuing discussion will refer mostly to that framework. It may be that generative phonology will either supplement it or supplant it (and the basis of articulation will be described in a "metarule" of the type suggested by Kim 1972); I believe, however, that the practical descriptions of the articulation basis will be formulated in much the same way, whatever their underlying theoretical framework.

The aspect of pronunciation which is given priority in all foreign language courses is the acquisition of the phonological distinctions of the target language, i.e., the suppression of phonological interference. That involves, in terms of articulation, the mastery of the principal variants of particular foreign phonemes and of those prosodic features that are functional (i.e., distinctive) in the communicative sense. In the "minimum" programmes which aim primarily at achieving the ability to communicate in the foreign language, the phonetic means used to maintain the phonological distinctions of the target language are not particularly important. As Abercrombie (1967:5) puts it,

> "... a medium is far from completely absorbed by being a vehicle for a specific language. There is always a certain amount of play, as it were, within the limits of the patterns; all that is necessary for linguistic communication is that the contrasts on which the patterns are based should not be obscured."

Thus, as long as e.g. the four German phonemes /e/, /ε/, /ø/, /œ/ are not all realized by the Polish learners as [ε], or English /θ/ is not realized as [s] or [f] (cf. *thin, sin, fin*) or *send* is not confused with *sent*, there is quite a wide margin of acceptable realizations. These are usually the native "equivalents", e.g. the Polish rolled [r] used for the English continuant [r], or in the case of "unfamiliar" sounds — approximations, e.g. [ø] used for the English [əː] and interdental instead of dental [θ]. Such realizations might be called compensatory, as the mechanism of their formation resembles that of compensation in pathological speech of native speakers (see Drachman 1969).

The learner who by some means, such as above, has mastered the phonological distinctions of the foreign language during a "minimum" programme, will be able to communicate with the native speakers (i.e., will be understood — his own comprehension is not really ensured), but will have a more or less pronounced "foreign accent". Most language courses, however, aim at a degree of phonetic accuracy and contrastive analysis is concerned with that aspect of pronunciation, to optimize communicativeness and add naturalness to the learner's utterances in the foreign language, in other words, to reduce the heaviness of the foreign accent.

The question of what constitutes the "accentless", natural speech (i.e., "consonant with the character of the language; instinctively felt and recognized by the native to be right; unexaggerated" (Honikman 1964: 83)) is best answered by reference to *phonetic norms* of a language or language variety. The word "norm" in this sense has been well described by Dłuska with reference to a certain prosodic feature of Polish, which is non-distinctive but

> "... normalny w sensie stałego występowania. ... Ta norma umożliwia przeciwstawienie jej tego co nią nie jest, umożliwia zaistnienie deformacji, a dalej ocenę ich jako ekspresywnych lub jako obcojęzycznych względnie w ogóle pozajęzykowych." (1957: 113, 115).

Phonetic norms are then abstractions from the utterances of particular speakers of a given language variety, which summarize the non-functional, i.e., redundant, phonetic features of that variety. When we consider Abercrombie's remark about the "play" within the limits of the language patterns, we must remember that it is not totally a game without rules. Each language has its own phonetic (articulatory) redundancies (though there are certain universal conventions involved — see e.g. Stample 1969, Drachman 1970). The norms have to be extracted from individual realizations: what we actually hear is the realization of norms, the core common to all non-pathological speakers, with a wealth of idiosyncratic features superimposed on the core (lisping, nasal speech, adenoidal speech, creaky voice, permanent labialization, flattening of vowels, etc.) — all those individual characteristics that are either innate, habitual or cultivated. However, the establishing of norms to be studied for descriptive, contrastive, or elocutionary purposes is greatly facilitated by the speakers' *awareness* of the norms: even without any particular training they are able to separate acceptable realizations of the norms from those that exceed the limits of acceptability ("hypercorrections", speech defects, even such deviations that would not be classed as pathological by speech therapists). A representative set of the pronunciations considered to be the most "normal" is taken as the basis for study.

A standard contrastive approach to the teaching of the phonetic norms of the language to be learnt might be called atomistic or postural; although it accounts for some aspects of speech dynamics (coarticulations, assimilations, prosodic features), it is mainly concerned with giving details of the formation of both the principal and positional variants of phonemes and their distribution. Also, it is often assumed that no special teaching is required in the case of those sounds and prosodic patterns which are more or less the same as those of the native language. Thus Morciniec and Prędota (1973:19) write:

> „porównawcza analiza fonetyczna języka polskiego i niemieckiego wykazuje, że niektóre głoski obu języków są, praktycznie biorąc, takie same, że takie same są niektóre połączenia, określone prawa asymilacji, czy wreszcie pewne typy akcentuacji i intonacji. Uczeń polski nieświadomie, bez żadnych specjalnych wyjaśnień i ćwiczeń, głoski te będzie wymawiał poprawnie. Nauczanie tych głosek jest więc niepotrzebne".

Consider, however, the following remark by Szulc (1969 : 40).

> „Nader rzadko zdarza się ... ..., aby dwa alofony, należące do dwu różnych systemów językowych, miały identyczną artykulację. Dzieje się tak dlatego, że nie ma w zasadzie dwu języków o tych samych *ogólnych tendencjach artykulacyjnych*".

The awareness of "general articulatory tendencies", which influence all segments of utterances in a given language and add a layer of phonetic features superimposed on the sequences of postures (not entirely identifiable with assimilations, coarticulations and prosodic features, though), is occasionally voiced in manuals of pronunciation, e.g. "German must be spoken vigorously..." (Kurtz and Politzer 1966 : 5, quoted after Kelz 1971 : 206); "... Proper French pronunciation is achieved only by more vigorous articulation and much greater use of lip muscles than for American English" (Ketcham and Collignon 1961 : XII, quoted after Kelz 1971 : 207). In most textbooks, however, such non-segmental features are either not mentioned at all or described as features of particular segments, whereupon an important and time-saving generalization is missed, by not grasping the general coordinating nature of such phenomena. These can be grasped without special instruction by people who have the so-called good ear, flair for languages and talent for mimicry — and only such "naturals" attain the near-native pronunciation of a foreign language. However, any observant layman can detect certain more obvious over-all characteristics of a particular foreign language, which is proved by such remarks as "the English don't open their mouths when they speak" or "Russian is spoken with a grin from ear to ear". Such descriptions, naive though they may sound, are in fact the best working definitions of the articulation bases of particular languages. Such cues about the general phonetic character of languages are used e.g. by entertainers who can speak their language with a variety of foreign accents. Utilizing such cues, while genuinely conducive to a better pronunciation, is not frequently done in language courses. Teachers are either unaware of them or regard them as tricks that are without scientific foundation, not prescribed by "the book" and therefore to be discarded.

The spontaneous divining of the articulation basis of the target language is usually prompted by both visual and auditory clues. However, the auditory effect is not a very reliable basis for imitation, because it is of necessity described in impressionistic terms which are relative and vague. Thus, if the imitation of English is based on the auditory term "muffled", an idiosyncratic pseudo-basis can emerge, which produces perceptual effects that are perhaps more offensive to the native ear than straightforward native basis. The ability of learners to imitate what they hear is questionable. This has been the reason why not the auditory but the articulatory basis is the older and the more familiar term. Kolosov (1971 : 40) suggests that in the teaching of the foreign articulation basis the auditory control should be excluded in the first stages and a series of exercises with silent articulation ("bezzvučnoye artikulirovanye") should be devised to "implant", as it were, the target basis by referring to *visual, tactile* and *kinesthetic* cues (cf. the standard audio-lingual approach to the teaching of pronunciation).

Most of what has been said so far was familiar to that generation of phoneticians who studied the problem of the articulation basis towards the end of the nineteenth century (though the notion of the phonological system was not yet in use and the instrumental methods of investigating speech production were still imperfect). Most definitions of the term were given for the purposes of language teaching, e.g.:

> "Every language has certain general tendencies which control its organic movements and positions, constituting its organic basis or basis of articulation. A knowledge of the organic basis is a great help in acquiring the pronunciation of a language" (Sweet 1890 : 69–70).

In fact, the descriptions of the articulation bases of languages were the first attempts at contrastive analysis and it is somewhat ironical that there is any need to demonstrate the relevance of the term to such analysis. This, however, is not without reason: during the larger part of the time that has elapsed between the coining of the term by F. Franke (c. 1884) and the present day, no standardized parameters were provided for measuring the basis of articulation of a given language. Although most of the insights of the earlier phoneticians concerning the phonetic nature of languages were intuitively felt to be correct, the vagueness of some statements and random selection of parameters in the description of bases of articulation prevented the term from being seriously considered in more recent times.

More exhaustive discussions of the definitions, origin, development and application of the notion "basis of articulation" are given e.g. by Kelz (1971) and Górka (1973). At this point I shall only review the three main standpoints concerning the meaning of the term:

1. Articulation basis understood as the relative position of rest or neutral position characteristic of a particular language ("relative Ruhelage", "Indifferenzlage", "Sprechstellung") as opposed to the absolute position of rest ("absolute Ruhelage", "Atemstellung");

2. Articulation basis understood as the position of the vocal tract just before articulation begins ("aktive Sprechbereitschaftslage");

3. Articulation basis understood as the activity of the speech organs in the speech process ("Grundhaltung der Organe im Sprechprozess") or as habitual articulatory tendencies of the speech organs in speech.

In the earlier definitions of the basis of articulation there was naturally no reference to the phonological system (pre-phoneme era!); system is mentioned in Stopa (1948 : 17), where he distinguished a ***systemic basis***:

> ,,Baza systemowa: zespół tendencyj lub cech wymawianiowych wynikłych z rodzaju systemu fonetycznego danego języka" —

and a ***pronunciation basis***:

> ,,Baza wymawianiowa: podstawa narządów mowy widoczna już w milczeniu ale ujawniająca się najwyraźniej w momencie tuż przed otwarciem ust dla wymówienia jakiegoś dźwięku właściwego danemu językowi. Ma ona duże znaczenie praktyczne przy uczeniu języka obcego. Opanowanie tej bazy, czyli umiejętność przestawienia organów z postawy właściwej językowi ojczystemu na postawę odpowiadającą językowi obcemu, jest równoznaczna z nabyciem tzw. ≪akcentu owego języka≫" (Stopa 1948:16).

In Chomsky and Halie (1968 : 300) the term "neutral position" is taken to mean a universal position that the organs of speech assume just prior to speaking (the position for the English vowel [e] in the word *bed*); it appears then that both the position for quiet breathing and the "Sprechbereitschaftslage" are language-independent. However, there are arguments against such treatment: Annan (1971 : 18) gives evidence for the language-specific character of the neutral position by examining the so-called "vocalic filled pause" in various languages ("... in my native Scots /ü/ or /e/ dependent on dialect or accent, Erse /a+/, Portuguese and Rumanian /ɐ/, French /ø/, German and Swedish /œ/, Russian /i/ and Cameroons Pidgin /ɛ̃/ or /[illegible]/". In Polish it is, I think, a slightly nasalized /ɛ/; the English /e/ of *bea* would probably sound somewhat odd.

The position described by Chomsky and Halle may be universal at early stages of phonological acquisition, which, Drachman states, (1970 : 476) are:

> "universal and the corresponding bases of articulation for those stages are likely to show many universal traits too... As the innate phonological system interacts with the abstract system of a particular language, it conspires towards such a basis of articulation as will automatically guarantee in detail the phonetic outputs sanctioned for any given dialect or style of speech in the language acquired".

The recent date of such publications as Drachman's (1969, 1970) or Kim's (1972) indicates a revival of interest in the notion "basis of articulation". The development of natural phonology (see e.g. Stampe 1969) will undoubtedly provide new insights into the problem of "programme adaptations" in the vocal tract.

At the moment the most satisfactory (pedagogically) account of the articulation basis is to be found in Honikman (1964). She is the only author to date who has attempted to give a description and comparison of articulatory settings of languages, which is based on a systematic examination of a definite set of articulatory parameters that can be experimentally investigated and verified. She distinguishes two articulatory settings: 1. *external* — which accounts for the over-all positioning of the lips and jaws, i.e., parts that are directly observable, 2. *internal* — "the over-all positioning of the internal mobile organs of the mouth for natural utterance" (1964: 75). This is assessed by reference to the main consonant articulation (i.e., to the character of the phonological system of a language), to the position of the tongue (anchorage, tip, body, underside), and also to the state of the oral cavity — that is, to those aspects of pronunciation which are described with the help of instrumental data (X-ray tracings, palatograms, linguograms, electromyography, etc.).

To illustrate the way in which the evidence about particular elements of the settings can be collected and used in formulating the over-all articulatory specificity of a language, I shall make a preliminary examination of those elements on the basis of the relevant data from Polish. Simultaneously, a comparison with English will be made on the basis of the equivalent data from the British RP variety of English.

The data used are:

1. visual cues (about the position and "look" of lips, jaws and cheeks);
2. instrumental data (providing evidence about the internal setting);
3. sound statistics (the relative frequency of occurrence of sound-types or phonemes; will provide evidence about the influence of the sound system on both the external and internal settings).

In a full analysis of articulatory settings conclusions should be based on measurements of articulation for different subjects and then "computed to show statistical evidence" (Annan 1971 : 18). In the first approximation to be given here the statistical evidence is shown in terms of phonemes and only in one case are variants referred to (palatalized variants of consonants). In a more detailed study other variants will have to be considered, e.g. the two-segmental realizations of Polish nasal vowels /ɛ̃/, /ɔ̃/ and the calculations readjusted accordingly. In fact, a statistical analysis of phone-types may be more reliable, as phonemic interpretations which strive for symmetry and economy of notation may obscure phonetic facts (e.g. some interpretations of English diphthongs).

The external setting of Polish as compared to that of English:

Jaws

The position of jaws and their movement is to some extent determined by the frequency of occurrence of *open* vs. *close* vowels. Diagrams 1 and 2 present the frequencies of occurrence of particular vowels in English and Polish (based on the findings of Fry 1947, quoted after Gimson 1970, and of Steffen 1957). It can be seen from the Diagrams that in Polish the vowels in the half-open-to-open region predominate (/ɛ/ /a/ /ɔ/ — 69.2% of all), while in English the vowels produced in that region constitute only 24.4% of all vowels (including the four diphthongs whose first element only is found in the region considered). As Delattre (1969 : 2) says, "English typically centers its articulation around the neutral vowel /ə/". This means that tlhe lower jaw is more mobile in Polish than in English, because Polish has a higher percentage of the open articulations. Visual cues confirm the statistical result. "In English", says Honikman (1964 : 75), "the jaw-movement is so slight and the internal setting such that the tongue is hardly ever visible during utterance". Indeed, the tongue can only be seen when e.g. /l/ is spoken by the deaf or to the deaf and the effect is very striking. The jaws in English are, then, loosely closed and "the aperture between the upper and lower teeth is generally never wide — at most about a finger's width" (Honikman 1964 : 80). The mobility of the lower jaw in Polish may be emphasized by the slight clenching of the jaws in palatal or palatalized articulations. The movements are not only more extensive than in English but also more energetic (cf. the combinations V+/j/ in Polish and the "unfinished" diphthongs in English).

Lips

The percentages of sounds produced with lip-rounding is low in both languages. Both English and Polish have only the front-unrounded and back-rounded series of vowels (cf. French and German); therefore the contrasting vigorous adjustment of lips is unnecessary. Rounding and accompanying protrusion is only intermittent. In English lips "mostly remain rather neutral, slightly and loosely apart, slightly cornered and with only moderate mobility" (Honikman 1964 : 74–5). Stopa (1948 : 16). remarks that English has "luźne kąty ust, wargi niemal że obwisłe".

In Polish the position of lips differs in one detail which has already been mentioned by Stopa (1948:16): "Łagodne napięcie lekko cofniętych kątów ust" and which is also evident in the photographs of lips in Wierzchowska (1971). The pressure of the corners against the pre-molars is most noticeable in the pronunciation of palatal and palatalized consonants: it may be that this position has become habitual for all sounds (or most) but this strong claim will have to be tested.

Cheeks

In English they are neutral and relaxed; in Polish — because of the specific lip position — they appear alternately dimpled and puckered or elongated (stretched downwards) for the open vowels — but the dimpling effect is the most dominant.

The internal setting of Polish as compared to that of English:

The internal setting is partly determined by the main consonant articulation. In both languages it is the articulation in the denti-alveolar region which is the most frequent (this is the case in many other languages as well). However, the percentages differ (see Diagrams III and IV); in English the predominance of the denti-alveolars is very striking (61.7% of all consonants), while in Polish their frequency is only 46.35%, or — if we subtract the palatalized variants — 45.15%. The second most frequent group in both languages is that of labials (22.32% in English and 26% in Polish). However, if all palatalized variants are added to the true palatals, then the group will become the second most frequent type with 18.4% +5.6%=24%, as opposed to all non-palatalized labials with 21.21%. Thus there are two forces operating on the phonetic substance of Polish; it has already been remarked that the palatal articulation has a strong influence on the articulatory parameters of non-palatals (lips, cheeks, possibly jaws — which have to be very close for palatals on account of the tongue rising to the roof of the mouth to ensure the wide articulatory contact, as shown in Wierzchowska 1971 : 178 "Spółgłoski miękkie").

The main *active articulator* appears to be the apex for the English sounds and predorsum for Polish (cf. Gimson 1971 and Wierzchowska 1971; especially the latter's discussion on the classification of Polish sounds according to the three basic positions of the tongue: flat, front and back, 1971: 108–9).

The anchorage is in English "laterally to the roof" (Honikman 1964: 81). She states: "almost throughout English, the tongue is tethered laterally to the roof of the mouth by allowing the sides to rest along the inner surface of the upper lateral gums and teeth" (1964 : 76).

In Polish the apex is an anchorage of sorts: for most of the time it lies behind the lower front teeth (X-ray tracings in Wierzchowska 1971, esp. 108–9). The proof that it is the best "candidate" for the function is the low distortion of sound when Polish is spoken with the apex permanently in the anchored position (cf. the higher distortion in English in such articulation).

The *body* of the tongue appears to be concave to the roof in English (very few palatal sounds, apex articulation), while it tends to be convex in Polish (the influence of palatal articulation, apex anchored to the floor of the oral cavity).

Honikman does not include the state of the glottis among the parameters. The reason for this may be that auditory adjustment is necessary in exercises on the degrees of voicing utilized by various languages. The visual, tactile, and kinesthetic pre-programming suggested by Kolosov (1971) for getting

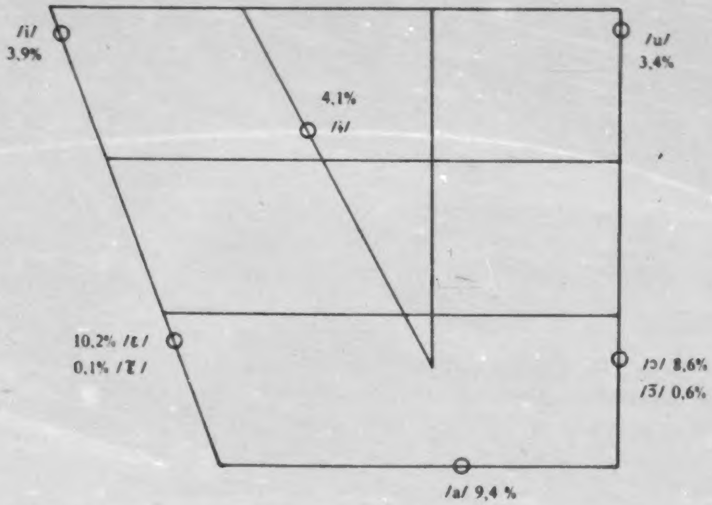


Diagram 1. Polish vowels: frequency of occurrence.
Vowels in the half-open-to-open region constitute 27.9% of all phonemes, i.e., 69.2% of all vowels.

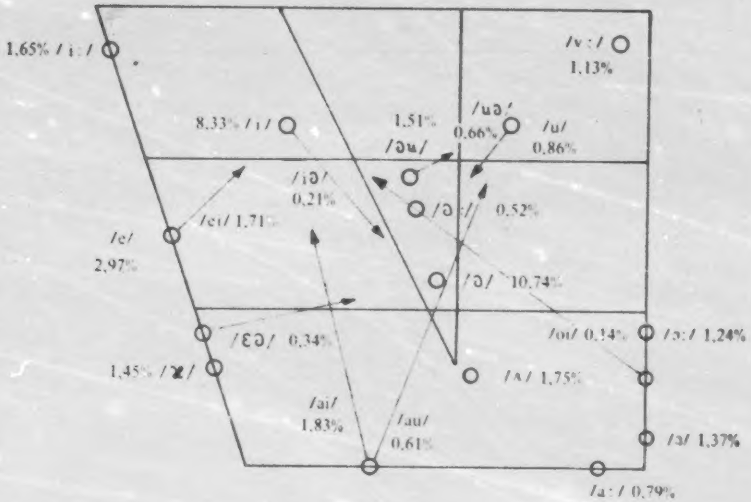
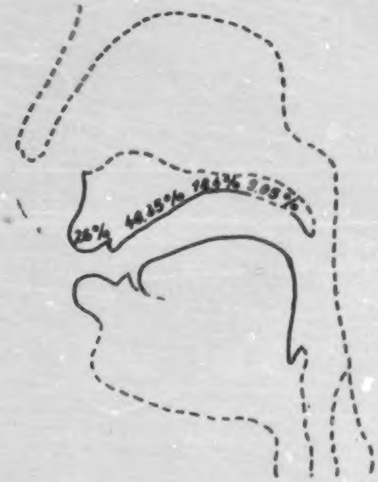
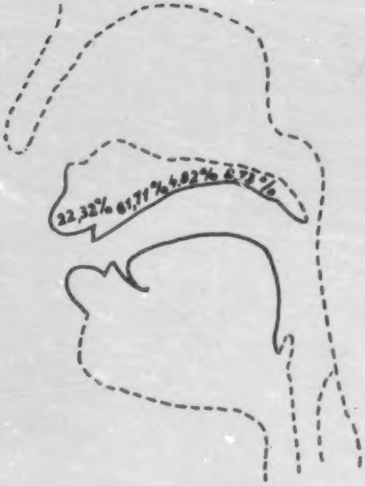


Diagram 2. English vowels: frequency of occurrence.
Vowels in the half-open-to-open region constitute 9.52% of all phonemes, i.e., 24.2% of all vowels.



26%
48,35%
16,6%
9,05%

Diagram 3. Polish consonants: relative frequency of occurrence (4.26% of labials, 1.2% of denti-alveolars, and 0.14% of velars are palatalized).



22,32%
61,71%
4,02%
6,75%

Diagram 4. English consonants: relative frequency of occurrence.

into the foreign articulatory "gear" (Honikman's term) will at some point have to be aided by auditory training. MacCarthy (1969) lists the auditory distinctions to be practised. The articulatory and auditory pre-orientation that would capture the general aspects of the pronunciation of the foreign language and instil the over-all articulatory and auditory habits of the language in the learner, would facilitate to a considerable extent the correct formation of "particular sounds". The exercises for acquiring the auditory basis remain to be prepared; those which help in acquiring the articulatory basis have already been prepared by Honikman and Kolosov. The latter reports, moreover, highly successful results in the teaching of the pronunciation of German to Russian schoolchildren (1971 : 54) on the basis of an experiment in which a group of learners who had some training in German articulatory settings acquired greater phonetic accuracy and naturalness than a control group taught by standard auditory and postural methods.

The preparation of exercises for the mastery of the basis of articulation may be brought to depend on more factors than those mentioned above with the development of methods of contrastive research (see e.g. Delattre: 1969, where he lists "40 sections to be studied for contrastive purposes in phonetics"). This will be in order, provided that the final formulation presented to the learner is *simple*. Much of the appeal of the notion "basis of articulation" lies in the fact that e.g. a simple instruction like "keep your jaws closer and your lips neutral" brings evident improvement where the pronunciation of Polish learners of English is concerned.

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FINAL CONSONANT CLUSTERS IN ENGLISH AND POLISH

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0. Some introductory remarks

The present paper is an attempt to discuss various consonant combinations (i.e. sequences) permissible in word final position in Standard Present-Day British English and in Standard Present-Day Polish from a purely static point of view. The final consonant clusters will be discussed here in a two-fold way:

a) they will be characterized in terms of which consonant occupies which position in the sequence;
b) they will be tabulated and characterized in terms of distinctive features.

The English consonant clusters have already been the subject of many studies (cf. Bloomfield, L. (1933 : 131–135); Cygan, J. (1971 : 83–98); Fisiak, J. (1968 : 3-14); Hill, A. A. (1968 : 68–88); Hill, A. A. (1963 : 162–172); Hultzen, L. S. (1962 : 5–19); Trnka, B. (1966)). They were discussed both from the point of view of permissible co-occurrences of consonant phonemes and from the point of view of distinctive feature sequences. The Polish consonant clusters have also been the subject of some studies (cf. Awedykowa, S. (1972 : 39–43); Bargieł, M. (1950 : 1-24); Kuryłowicz, J. (1952 : 54–69); Ułaszyn, H. (1956)). The consonant systems of English and Polish have additionally been presented in two unpublished studies (see Kopczyński, A. (1968 : 88–103); Rubach, J. (1971)).

1. Traditional phonetic notation and the distinctive feature system

The English and Polish final clusters consist of two, three, and four consonants (throughout the paper they will be referred to as clusters of the —CC, —CCC, and —CCCC type). All the consonants co-occurring in the clusters are rendered by means of traditional phonetic notation. Thus, all English consonant segments are represented by the following symbols (as used by Halle, M. (1964: 324–333)): /p, b, t, d, k, g, f, v, θ, ð, š, ž, s, z, č, ǯ, m n, ŋ, l/. The Polish consonant segments, in turn, are represented by the following symbols (as used by Doroszewski, W. (1963 : 70–71), and Wierzbowska, B. (1971: 149–197)): /p, b, t, d, k, g, χ, f, v, s, z, š, ž, ś, ź, c, ʒ, č, ǯ, ć, ʒ́, m, n, ń, l, r, w/. Before going any further on, however, let us make one assumption, namely that each individual symbol of this notation stands for a complex of features[1], and, consequently, that a sequence of two, three or four consonant symbols stands for a sequence of feature complexes. In our paper we shall further assume that the consonants co-occurring in the final clusters occupy positions -1, -2, -3 and -4, starting from the adjacent vowel on the left to the rightmost position.

2. Final clusters in English

2a. The final clusters of the —CC type include the following:

/-pt/	*apt*	/-vd/	*loved*
/-kt/	*act*	/-ðd/	*loathed*
/-čt/	*itched*	/-zd/	*buzzed*
/-ft/	*lift*	/-ž d/	*rouged*
/-st/	*frothed*	/-md/	*damned*
/-st/	*lost*	/-nd/	*stand*
/-št/	*furnished*	/-ηd/	*belonged*
/-mt/	*prompt*	/-ld/	*sold*
/-nt/	*rent*	/-ps/	*lips*
/-ηt/	*inked*	/-ts/	*cats*
/-lt/	*dealt*	/-ks/	*books*
/-bd/	*robbed*	/-fs/	*wife's*
/-gd/	*bagged*	/-θs/	*oath's*
/-ǯd/	*edged*	/-ms/	*glimpse*
/-ns/	*tense*	/-lf/	*elf*
/-ls/	*else*	/-nθ/	*seventh*
/-bz/	*rubs*	/-lθ/	*health*
/-dz/	*adds*	/-mθ/	*warmth*
/-gz/	*eggs*	/-ηθ/	*length*
/-vz/	*believes*	/-dθ/	*width*
/-ðz/	*oath*	/-tθ/	*eighth*
/-mz/	*rims*	/-pθ/	*depth*

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[1] The system of distinctive features preferred in the paper is that of Noam Chomsky and Morris Halle as proposed in *The sound pattern of English* (1968).

/-nz/	*lens*
/-ηz/	*hangs*
/-lz/	*tells*
/-sp/	*lisp*
/-mp/	*imp*
/-lp/	*help*
/-sk/	*ask*
/-ηk/	*think*
/-lk/	*talc*
/-nč/	*lunch*
/-lč/	*belch*
/-nš/	*lunch*
/-lš/	*welsh*
/-mf/	*triumph*
/-fθ/	*fifth*
/-mb/	*rhomb*
/-lb/	*bulb*
/-nǯ/	*plunge*
/-lǯ/	*bulge*
/-nǯ/	*plunge*
/-lž/	*bulge*
/-lv/	*delve*
/-lm/	*film*
/-ln/	*kiln*

Hultzen also proposes the cluster /-sθ/, as in *isthmian*; the cluster, however, is not included in our list, for it is difficult to establish whether the cluster is a final one or not. This is due to the fact that the word may be divided either into *is+thmian* or *isth+mian*. Thus, the following consonants occupy positions 1 and 2:

Table 1

position 1	position 2
b	b
p	p
t	t
d	d
k	k
g	
f	
v	
θ	θ
ð	
s	s
z	z
š	š
ž	ž
ǯ	ǯ
č	č
m	m
n	n
η	
l	

2b. The final clusters of the -CCC type include the following:

/-spt/	*gasped*
/-mpt/	*pumped*
/-lpt/	*helped*
/-skt/	*asked*
/-ŋkt/	*extinct*
/-mft/	*triumphed*
/-lft/	*delft*
/-nst/	*against*
/-lst/	*pulsed*
/mst/	*glimpsed*
/-ŋst/	*amongst*
/-pst/	*lapsed*
/-kst/	*text*
/-tst/	*midst*
/-dst/	*midst*
/-tθt/	*widthed*
/-dθt/	*widthed*
/-nθt/	*tenthed*
/-dzd/	*adzed*
/-nzd/	*cleansed*
/-nǯd/	*plunged*
/-lǯd/	*bulged*
/-nžd/	*plunged*
/-lžd/	*bulged*
/-lbd/	*bulbed*
/-lvd/	*delved*
/-lmd/	*filmed*
/-lnd/	*kilned*
/-sps/	*asps*
/-mps/	*imps*
/-lps/	*helps*
/-sks/	*asks*
/-ŋks/	*thinks*
/-lks/	*elks*
/-sts/	*lists*
/-lkt/	*milked*
/-nčt/	*lunched*
/-lčt/	*belched*
/-nšt/	*lunched*
/-lšt/	*welshed*
/-nts/	*ants*
/-lts/	*halts*
/-mts/	*prompts*
/-ŋts/	*tincts*
/-pts/	*crypts*
/-kts/	*acts*
/-fts/	*lofts*
/-mfs/	*nymphs*
/-lfs/	*elf's*
/-nθs/	*months*
/-lθs/	*healths*
/-mθs/	*warmths*
/-ŋθs/	*lengths*
/-dθs/	*widths*
/-tθs/	*eighths*
/-pθs/	*depths*
/-fθs/	*fifths*
/-mbz/	*rhombs*
/-lbz/	*bulbs*
/-ndz/	*hands*
/-ldz/	*holds*
/-vdz/	*bereaved's*
/-zdz/	*accused's*
/-lvz/	*elves*
/-lmz/	*films*
/-lnz/	*kilns*

The following consonants occupy positions 1, 2, and 3:

Table 2

position 1	position 2	position 3
p	p	
	b	
t	t	t
d	d	d
k	k	
f	f	f
v	v	
	θ	θ
s	s	s
z	z	z
	š	
	č	
	ǯ	
m	m	
n	n	
η		
l		

2c. The final clusters of the -CCCC type include the following:

/ltst/	*waltzed*	/-ηkts/	*tincts*
/-ntst/	*chintzed*	/-lkts/	*mulcts*
/-ηkst/	*jinxed*	/-ksts/	*texts*
/-mpst/	*glimpsed*	/-ksθs/	*sixths*
/-mpft/	*triumphed*	/-mpθs/	*warmths*
/-mpfs/	*nymphs*	/-ntθs/	*thousandths*
/-mpts/	*prompts*	/-ηkθs/	*lengths*
		/-lfθs/	*twelfths*

The following consonants occupy positions 1, 2, 3 and 4:

Table 3

position 1	position 2	position 3	position 4
	p		
	t	t	t
k	k		
	f	f	
		θ	
	s	s	s
m			
n			
η			
l			

Thus, we may now establish the entire inventory of the English consonant segments occurring in the final clusters as follows: /p, b, t, d, k, g, f, v, θ, ǯ, s, z, š, ž, č, ǯ, m, n, η, l/. Below they have been tabulated and characterized in terms of the fully specified distinctive feature matrix.

Table 4

FEATURE	p	b	t	d	k	g	f	v	θ	ð	s	z	š	ž	č	ǯ	m	n	ŋ	l
consonantal	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
vocalic	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
nasal	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	+	+	−
anterior	+	+	+	+	−	−	+	+	+	+	+	+	−	−	−	−	+	+	−	+
coronal	−	−	+	+	−	−	−	−	+	+	+	+	+	+	+	+	−	+	−	+
continuant	−	−	−	−	−	−	+	+	+	+	+	+	+	+	−	−	−	−	−	+
voice	−	+	−	+	−	+	−	+	−	+	−	+	−	+	−	+	+	+	+	+
strident	−	−	−	−	−	−	+	+	−	−	+	+	+	+	+	+	−	−	−	−
sonorant	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	+	+	+

3. Final clusters in Polish

3a. The final clusters of the -CC type are very numerous in Polish. Awedykowa (1972 : 39) includes within that group also the glide-consonant combinations. Thus, she treats such sequences as /w–C/, as in *chełm*, and /j–C/, as in *wójt*, as final consonant clusters. However, our point of view is that the glides /w/ and /j/ are in this case parts of complex syllable nuclei and as such they are excluded from the group of the two-member clusters. Thus our list of the final –CC type of clusters includes the following:

/-χš/	*wichrz*	/-rk/	*kark, skarg*
/-χt/	*pacht*	/-lχ/	*olch*
/-rw/	*tarł*	/-lm/	*palm*
/-rχ/	*parch*	/-lf/	*golf*
/-rl/	*rozperl*	/-ls/	*hals*
/-rn/	*urn*	/-lš/	*odwilż*
/-rń/	*cierń*	/-lc/	*walc*
/-rm/	*karm*	/-lč/	*walcz*
/-rf/[2]	*torf, nerw*	/-lt/	*kult*
/-rs/	*tors*	/-lp/	*skalp, kolb*
/-rš/	*marsz, marż*	/-lg/	*ulg*
/-rś/	*pierś*	/-lk/	*wilk, ulg*
/-rg/	*skarg*		

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[2] In word final position all Polish voiced consonant segments are realized phonetically as voiceless consonants.

/-rc/	*harc*
/-rč/	*warcz*
/-rć/	*wierć, gardź*
/-rt/	*tort*
/-rp/	*skarp, torb*
/mf/	*triumf*
/-mš/	*zamsz*
/-mś/	*tłamś*
/-mč/	*zniemcz*
/-mp/	*lamp, bomb*
/-fč/	*sprawdź*
/-fr/	*cyfr*
/-ft/	*sztyft, prawd*
/-fl/	*trefl*
/-sw/	*ugryzł*
/-zn/	*blizn*
/-zm/	*spazm*
/-sf/	*nazw*
/-sp/	*izb*
/-sk/	*mózg*
/-sw/	*niósł*
/-sm/	*pasm*
/-sc/	*miejsc*
/-st/	*post, gwiazd*
/-sp/	*wysp, izb*
/-žp/	*wróżb*
/-šχ/	*wierzch*
/-šč/	*wieszcz*
/-št/	*koszt*
/-źń/	*bojaźń*
/-śf/	*orzeźw*
/-śp/	*rzeźb*
/-śl/	*myśl*
/-nf/	*tynf*
/-ns/	*trans*
/-nč/	*lincz*
/-nt/	*bunt*
/-nk/	*tynk*
/-ńč/	*tańcz*
/-ńp/	*hańb*
/-mn/	*hymn*
/-ms/	*gzyms*
/-śń/	*baśń*
/-śm/	*taśm*
/-ść/	*dość*
/-čt/	*uczt*
/-čp/	*liczb*
/-ćm/	*wiedźm*
/-ćp/	*gędźb*
/-tl/	*namydl*
/-dm/	*wydm*
/-tw/	*plótł, wiódł*
/-tr/	*wiatr, kadr*
/-tm/	*rytm*
/-tf/	*modlitw*
/-tš/	*patrz*
/-tč/	*zaświadcz*
/-pr/	*Cypr, dóbr*
/-pń/	*wapń*
/-ps/	*klops*
/-pš/	*pieprz*
/-pć/	*kopć*
/-pč/	*depcz*
/-pt/	*adept*
/-kw/	*siekł, strzygł*
/-ks/	*kleks*
/-kš/	*Kiekrz*
/-kt/	*trakt*
/-kl/	*cykl*

The following consonants occupy positions 1 and 2:

Table 5

position 1	position 2
p	p
	b
t	t
k	k
χ	χ
f	f
s	s
z	
š	š
ś	ś
ź	
č	č
	ć
	c
m	m
n	
ń	ń
r	r
l	l
	w

3b. The final clusters of the –CCC type include the following:

/-χšt/	*wychrzt*
/-χtr/	*blichtr*
/-rst/	*wiorst*
/-ršč/	*barszcz*
/-ršt//	*herszt*
/-rść/	*garść*
/-rpw/	*ścierpł*
/-lšč/	*spolszcz*
/-ltr/	*filtr*
/-nšt/	*kunszt*
/-nks/	*sfinks*
/-mst/	*pomst*
/-mpt/	*asumpt*
/-str/	*sióstr*
/-stm/	*astm*
/-stš/	*ostrz*
/-ščp/	*wieszczb*
/-štr/	*musztr*
/-ctf/	*wydawnictw*
/-psk/	*Lipsk*
/-stf/	*zabójstw*

The following consonants occupy positions 1, 2, and 3:

Table 6

position 1	position 2	position 3
p	p	
	t	t
	k	k
χ		
		f
s	s	s
š	š	š
	ś	
c		
	č	č
		ć
m		m
n		
r		r
l		
		w

3c. The final clusters of the -CCCC type include the following:

/-rstf/	*warstw*	/-fstf/	*marnotrawstw*
/-nctf/	*intrygunctw*	/-pstf/	*glupstw*
/-ństf/	*państw*	/-pstš/	*zapstrz*
/-mstf/	*klamstw*		

The following consonants occupy positions 1, 2, 3, and 4:

Table 7

position 1	position 2	position 3	position 4
p			
		t	
f			f
	s		
			š
	c		
m			
n			
ń			
r			

Table 8

FEATURE	p	b	t	d	k	g	x	f	v	s	z	š	ž	ś	ź	c	ʒ́	ć	ʒ	č	m	n	ń	l	r	w
consonantal	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	−
vocalic	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
nasal	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	+	+	−	−	−
anterior	+	+	+	+	−	−	−	+	+	+	+	−	−	−	−	+	+	−	−	+	+	+	−	+	+	−
coronal	−	−	+	+	−	−	−	−	−	+	+	+	+	+	+	+	+	+	+	+	−	+	+	+	+	−
continuant	−	−	−	−	−	−	+	+	+	+	+	+	+	+	+	−	−	−	−	−	−	−	−	+	+	+
voice	−	+	−	+	−	+	−	−	+	−	+	−	+	−	+	−	+	−	+	−	+	+	+	+	+	+
strident	−	−	−	−	−	−	−	+	+	+	+	+	+	+	+	+	+	+	+	+	−	−	−	−	−	−
sonorant	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+	+	+	+	+	+

Thus, the entire inventory of the Polish consonant segments coccurring in the final clusters comprises the following :/p, t, k, χ, f, s, z, š, ś, ź, c, ʒ, ć, ʒ́, č, m, n, ń, l, r, w/. Below they have been tabulated and characterized by means of the fully specfied distinctive feature matrix.

4. The English and Polish final clusters compared

4a. The –CC clusters

The English clusters may either begin with /l, m, n, ŋ/, i.e., the segments specified as $\begin{bmatrix}+\text{consonantal}\\+\text{sonorant}\end{bmatrix}$, or with /p, t, d, b , k, g, f, v, θ, ð, s, z, š, ž, č, ǯ i.e., segments having the features $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$. Position 2 is occupied either by /m, n/, characterized as $\begin{bmatrix}+\text{consonantal}\\+\text{nasal}\end{bmatrix}$, or by /p, b, t, d, k, θ, s, z, š, z, č, ǯ/, i.e., the segments which may again be characterized as $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$.

In the Polish clusters the initial segments may be either /r, l, m, n, ń/, with the features $\begin{bmatrix}+\text{consonantal}\\+\text{sonorant}\end{bmatrix}$, or /p, t, k, χ, f, s, z, š, ś, ź, č/, characterized as $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$. Position 2 is filled either by /m, ń, r, l/, with the features $\begin{bmatrix}+\text{consonantal}\\+\text{sonorant}\end{bmatrix}$, by /w/, specified as $\begin{bmatrix}-\text{consonantal}\\+\text{sonorant}\end{bmatrix}$, or by /p, t, k, χ, f, s, š, ś, ć, č, c/, having the features $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$. We can present the above short comparison by means of the following diagram:

Table 9

	position 1		position 2	
English	$\begin{bmatrix}+\text{consonantal}\\+\text{sonorant}\end{bmatrix}$	$\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$	$\begin{bmatrix}+\text{consonantal}\\+\text{nasal}\end{bmatrix}$	$\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$
Polish	$\begin{bmatrix}+\text{consonantal}\\+\text{sonorant}\end{bmatrix}$	$\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$	$\begin{bmatrix}-\text{consonantal}\\+\text{sonorant}\end{bmatrix}$ $\begin{bmatrix}+\text{consonantal}\\+\text{sonorant}\end{bmatrix}$	$\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$

46. The -CCC clusters

The three-member clusters in English may either begin with /l, m, n, η/ i.e., the segments characterized as $\begin{bmatrix}+\text{consonantal}\\+\text{sonorant}\end{bmatrix}$, or with /p, t, d, k, f, v, s, z/, having the features $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$. Position 2 allows for the occurrence of either /m, n/, specified as $\begin{bmatrix}+\text{consonantal}\\+\text{nasal}\end{bmatrix}$, or /p, b, t, d, k, f, v, θ, s, z, š, č, ǯ/, most generally characterized as $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$. Position 3, in turn, is occupied by /t, d, f, θ, s, z/, with the features $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$.

The Polish three-member clusters begin either with /m, n, r, l/, which are characterized as $\begin{bmatrix}+\text{consonantal}\\+\text{sonorant}\end{bmatrix}$, or with /p, χ, s, š, c/, specified as $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$. Position 2 is occupied by the following segments: /p, t, k, s, š, ś, č/; they are again characterized as $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$. And finally, position 3 is filled by /m, r/, with the features $\begin{bmatrix}+\text{consonantal}\\+\text{sonorant}\end{bmatrix}$, by /w/, i.e., the segment characterized as $\begin{bmatrix}-\text{consonantal}\\+\text{sonorant}\end{bmatrix}$, and also by /p, t, k, f, s, š, č, ć/, with the features $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$. We can again present the above short comparison by means of the following diagram:

Table 10

	position 1	position 2	position 3
English	$\begin{bmatrix}+\text{consonantal}\\+\text{sonorant}\end{bmatrix}$ $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$	$\begin{bmatrix}+\text{consonantal}\\+\text{nasal}\end{bmatrix}$ $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$	$\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$
Polish	$\begin{bmatrix}+\text{consonantal}\\+\text{sonorant}\end{bmatrix}$ $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$	$\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$	$\begin{bmatrix}+\text{consonantal}\\+\text{sonorant}\end{bmatrix}$ $\begin{bmatrix}-\text{consonantal}\\+\text{sonorant}\end{bmatrix}$ $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$

4c. The -CCCC clusters

The four-member clusters in English may either begin with /m, n, η, l/, characterized as $\begin{bmatrix}+\text{consonantal}\\+\text{sonorant}\end{bmatrix}$, or with /k/, specified as $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$. Position 2 is occupied by /p, t, k, f, s/, i.e., the segments with the features $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$. The following occur in position 3: /t, f, s/; they are $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$. In position 4 only /t, s/ occur; they are also $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$.

In the four-member clusters in Polish position 1 is occupied either by /m, n, ń, r/, with the features $\begin{bmatrix}+\text{consonantal}\\+\text{sonorant}\end{bmatrix}$, or by /p, f/, having the features $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$. In position 2 only /s, c/ occur. They are $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$. Position 3 is occupied only by /t/, characterized as $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$. And finally, position 4 allows for the occurrence of /f, š/. They have the features $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$. We have again presented the above comparison by means of a diagram:

Table 11

	position 1	position 2	position 3	position 4
English	$\begin{bmatrix}+\text{consonantal}\\+\text{consonantal}\end{bmatrix}$ $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$	$\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$	$\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$	$\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$
Polish	$\begin{bmatrix}+\text{consonantal}\\+\text{sonorant}\end{bmatrix}$ $\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$	$\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$	$\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$	$\begin{bmatrix}+\text{consonantal}\\-\text{sonorant}\end{bmatrix}$

5. In the present short contrastive study of the final English and Polish clusters only three distinctive features have been utilized, viz. [consonantal], [sonorant], and [nasal]. They are most general and the study is far from complete. However, it was not the purpose of the paper to discuss some aspects of dynamic phonological processes in English and Polish, but merely to compare in a static way the various co-occurrences of consonant segments in the final clusters.

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ON SOME LINGUISTIC LIMITATIONS OF CLASSICAL CONTRASTIVE ANALYSES

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In this paper I intend to show that classical contrastive analyses of all sorts are incapable of grasping certain important generalizations concerning differences between the compared languages. By classical contrastive analyses I understand such analyses in which the contrasting procedures have no generative format, even if they are based upon generative grammars of the compared languages, i.e., such grammars which are both explicit and predictive (cf. Lyons 1968 : 155). Classical contrastive analyses are taxonomic in nature since they are limited to yielding inventories of differences and possible similarities between parallel systems of the compared grammatical structures, between equivalent sentences and constructions and between equivalent rules operating at various levels of derivations. All classical contrastive analyses are based on sentence grammars (S-grammars), i.e., on grammars which define sentence rather than longer stretches of the text. (For a discussion of differences between sentence grammars and text grammars see Van Dijk 1972 : 12 ff.). In another paper (Krzeszowski 1972; 1974) I suggested that for reasons independent of those discussed below classical contrastive analyses should be replaced with such analyses which would lead to the constructions of Contrastive Generative Grammar (CGG) or a device which enumerates equivalent sentences in the compared languages, and in doing so provides them with structural descriptions and indicates those places of the derivations which are identical and those which are different. CGG assigns the status of equivalence to those sentences only which have identical semantic inputs in the two languages. In this manner CGG explains, at least in part, the bilingual informant's intuitions motivating the recognition of particular pairs of sentences as equivalent across languages (for more detailed suggestions see Krzeszowski 1974). This paper, however, will be limited to a discussion of some linguistic limitations of classical contrastive analyses, which ultimately also points to the necessity of reconsidering their status vis a vis CGG.

In classical contrastive analyses it is possible to distinguish three types of comparisons:

1. Comparisons of particular equivalent systems across languages, for instance, the system of personal pronouns, of articles, of verbs, etc.

2. Comparisons of equivalent constructions, for instance, interrogative constructions, relative clauses, negative constructions, nominal phrases, etc.

3. In contrastive analyses based upon transformational generative grammars, comparisons of equivalent rules, for instance, subject raising from the embedded sentences, adjective placement, interrogative inversion, etc. The comparison usually covers such properties of the rules as their obligatory or optional status, their ordering and their presence or absence in the compared languages. In the subsequent discussion we shall be referring to these three types of comparisons as type 1, type 2 and 3, respectively.

From the theoretical point of view, for each item undergoing comparison, each type of comparison may reveal three possible situations: (a) an item X in a language L_i may be identical with an item Y in a language L_j in one or more than one respects; (b) an item X may be different from an equivalent item Y; (c) an item X may have no equivalent in L_j. For example, in type 1 the systems of number of nouns in French and English are in one respect identical in that both systems are based upon the fundamental dichotomy "oneness" vs. "more-than-oneness". The system of number is in that respect different in, say, Sanskrit, where it is based on the trichotomy "oneness" vs. "twoness" vs. "more-than-twoness". The system has no equivalent in Chinese where nouns are not inflected for number. In type 2, the passive constructions in English and Polish are in some respects identical in that in both cases they involve a form of the auxiliary *be* or *get* in English and of *być* or *zostać* in Polish, in each language followed by the main verb in the form of the past participle. In new Testament Greek and in Japanese the passive constructions are different in that they do not involve any auxiliaries followed by the past participle forms of the verb, but they are formed synthetically (e.g. Gr. *luetai*, "is loosened", Jap. *korosaremasita*, "were killed"). In certain languages, such as Sumerian and Basque, in which there is no formal distinction between transitive and intransitive sentences, there is no distinction between active and passive constructions, either. These languages may be said to have no passive constructions at all (cf. Milewski 1965: 240).

In type 3 one can find that the rule optionally deleting the relative pronoun replacing the object operates in English and Brahui in the identical fashion (Andronov 1971 : 134). The equivalent rule in Hausa operates in a different way in that it is restricted to those instances only which involve verbless sentences as main clauses with the nominal element introduced by the particles ***ga***, "here (is)" and ***akwai***, "there (is)" (Ščeglov 1970: 177). In languages such as Polish, French, German and many others the rule does not operate at all.

It takes little reflection to realize that no rules generating sentences can be formulated without a thorough examination of the structure of particular sentences and sentence types (constructions). The latter is in turn impossible without a clear statement of the systems and their elements which are constituents of particular constructions. For example, the subject-raising in such English sentences as

(1) John wants Steve to kill Mary.

cannot be stated without providing the structural descriptions of the input and of the output to the rule, in terms of some sort of hierarchical constituent structure whose elements are also elements of the English system of nouns, verbs, etc. Thus of the three types of comparisons only the first one can be performed more or less independently, while of the remaining two each one heavily relies upon the results of comparisons (even if they are stated very informally) of the preceding type.

From the point of view of effecting a successful contrastive analysis, the third possibility in the first type of comparison, i.e., a situation in which a system X in L_i has no equivalent in L_j, is the most difficult to handle. I am going to claim that classical contrastive analyses fail to secure important generalizations about differences and similarities between the compared languages if the results which they yield are limited to the mere observation that a system X in L_i has no equivalent in L_j. I am also going to show that classical contrastive analyses are inherently incapable of making such generalizations.

Before undertaking the task proper, let us observe that a failure to identify equivalent constructions in two languages may be either a result of a failure to find an equivalent system involved in the compared constructions or a result of applying inadequate criteria of identification. A failure to find equivalent rules may result from a failure to find equivalent systems in the two languages and/or a failure to find equivalent constructions. A failure to find equivalent rules may also result from applying an inadequate model of grammar.

As was said before, classical contrastive analyses fail whenever a system in L_i cannot be matched with an equivalent system in L_j. It does not do to say that a contrastive analysis of L_i and L_j *reveals* the absence of a system in L_j which would be equivalent to a system in L_i. A revelation of this sort merely creates the question: how are the same meanings expressed in L_j, if at all? The answer to this question necessitates a search for some common platform of reference and the formulation of such rules which would account for the fact that the same semantic content is realized as different surface structures in the two languages. Thus comparisons of type 2 and 3 are immediately involved and affected by any realization of the lack of parallelism revealed by the comparison of type 1.

Classical contrastive analysis can successfully perform the comparison of type 1 (and consequently of the other two types) only in the case of those systems in L_i for which equivalent systems in L_j can be found. Suppose that there is a set of systems $S_1 \ldots S_n$ in some language L_i and a set of systems $Z_1 \ldots Z_m$ in some other language L_j and that the task of the investigator is to compare the parallel systems in the two languages, which, as was said earlier, constitutes type 1 of comparisons. It is impossible to predict that for each S there is going to be an equivalent Z. For example, English deictic systems, embracing auxiliaries and determiners, are extremely difficult to match with any well-defined systems in Polish. It is quite obvious that the mere observations of the fact that Polish has no perfect and continuous tenses or that it has no articles is not particularly illuminating, and its cognitive value is next to none. Immediately, there arises a question: how are English sentences containing perfect and continuous tenses and articles rendered in Polish? In other words, there arises the necessity of finding Polish *equivalents* of sentences containing continuous and perfect tenses and articles. Investigations inspired by such questions, if they are to be of any value, have to aspire to formulating certain *general principles* governing the matching of English and Polish sentences as equivalent.

At this point let us observe that in a situation in which there is a lack of parallelism between particular systems in L_i and L_j, the comparisons are reduced to a search for equivalent means of expressing the same contents in L_i and L_j, i.e., to type 2. Comparisons of type 2, however, cannot be successfully performed without establishing what specifically one is attempting to compare. Since one cannot rely on the matching of systems whose elements appear in the compared sentences and constructions, one has to base the comparison upon some common semantic or pragmatic platform. The formulation of such a platform, however, requires a clear view of the semantic and pragmatic content of the systems whose elements constitute the compared constructions. If, for example, one sets about comparing such an English sentence as

(2) John has killed that dog with an axe.

with its Polish potential equivalent

(3) Jan zabił tego psa toporem.

but not

(3a) Jan zabijał tego psa toporem.

one must make sure that the Polish equivalent expresses the same semantic content as does the English sentence. It will not do to say that Present Perfect in English is expressed by the Simple Past of completed verbs in Polish since one also encounters such equivalent pairs as

(4) John has read that book.

and

(5) Jan czytał tę książkę.

or

(5a) Jan przeczytał tę książkę.

The difficulty— consists in grasping the semantic content of the Present Perfect Tense in such a way as to account for all the instances of the appropriate use of the tense in actual sentences and hence for the appropriate matching of those sentences with Polish sentences as their equivalents.

As was said earlier, classical contrastive analyses, in those cases when they are unable to match equivalent systems, must attempt to match equivalent constructions in the compared languages. This task, however, cannot be adequately performed in a large number of structurally ambiguous or semantically vague constructions (such as (4)) without resorting to stretches of text longer than sentence. Classical contrastive analyses, being based upon sentence grammars, are inherently incapable of handling this task. Thus the failure of classical contrastive analyses to find equivalent systems in comparisons of type 1 is projected into their inability to match equivalent constructions in comparisons of type 2. Classical contrastive analyses fail to perform comparisons of type 2 adequately in the case of syntactically ambiguous and/or semantically vague constructions, since the theoretical framework which they have at their disposal does not make it possible to analyse longer stretches of the text. Facing an ambiguous sentence in L_i, an investigator following the principles of classical contrastive analyses will be unable to match it with an equivalent sentence or a class of equivalent sentences in without an exhaustive analysis of the ways in which the original sentence is ambiguous. The analysis may reveal that a sentence S_k in L_i is n-ways ambiguous and that a sentence S_l in L_j is m-ways ambiguous. The analysis may also reveal that some of the n-readings of $S_k^{L_i}$ are equivalent to some o. the m-readings of $S_l^{L_i}$, while the remaining readings are not equivalent Given a situation of this sort, one faces the problem of whether $S_k^{L_i}$ is equivalent to $S_j^{L_i}$. The problem cannot be solved without considering which specific readings of S_k^{L}i and of $S_l^{L_i}$ are involved. The determination of the specific readings of the sentences in question cannot be effected without examining longer, disambiguating contexts, i.e., stretches of texts longer than sentences. Suppose, for example, that the investigator confronts the following English sentence

(6) Drinking water can be dangerous.

which is ambiguous in at least two ways. One reading of (6) roughly corresponds to

(7) The drinking of water can be dangerous.

while the other reading roughly corresponds to

(8) Water for drinking can be dangerous.

In Polish (6) can have two equivalents:

(9) Picie wody może być niebezpieczne.

(10) Woda do picia może być niebezpieczna.

Without examining some disambiguating contexts in which (6) appears, the classical investigator in contrastive analyses will be unable to choose (9) or (10) as the equivalent of (6). He will be reduced to concluding that both (9) and (10) can be equivalents of (6) and will thus miss a generalization which could be grasped if a longer stretch of the text were examined.

On the other hand, confronting a pair of sentences such as

(11) The invitation of the doctor surprised John.

(12) Zaproszenie doktora wywołało zdumienie u Jana.

will be correctly recognized as equivalent but at the same time no account will be given of the fact that

(13) To, że doktor został zaproszony, wywołało zdumienie u Jasia.

may also be an equivalent of (11) upon one of its readings. The alternative reading of (11) will yield

(14) To, że doktor zaprosił (kogoś), wywołało zdumienie u Jasia.

The proper matching of equivalents on the basis of larger contexts is always possible to achieve by competent bilingual informants but cannot be accounted for by classical contrastive analysis, since it accommodates no theoretical framework which would provide means to analyse longer stretches of the text. Suppose that (11) appears in the following context:

(15) Mary decided to invite the doctor. The invitation of the doctor surprised John.

No competent bilingual informant will hesitate associating (11) in the context of (15) with (13) rather than with (14). Any contrastive analysis which does not provide explicit means for undertaking analogous decisions fails to grasp important generalizations concerning the matching of equivalent sentences across languages and thus proves to be inadequate. (For more examples of this sort see Krzeszowski 1973).

Being unable to account for the correct matching of equivalent sentences, classical contrastive analyses are reduced to comparisons of type **3**, i.e., to comparisons of rules. Considering such pairs of equivalents as (11) and (12), the investigator will claim that in both cases there are some such rules which map two different underlying structures onto one surface structure and that these rules operate in the two languages in a parallel fashion. The statement of the fact that the rules which are involved in the derivation of (11) and (12) are parallel is a useful generalization as far as it goes. Contrastive classical analyses fail to predict, however, which of the possible alternative realizations are obligatory in particular contexts. All they can predict is that either (13) or (14) can also be matched as equivalents of (11). In this way they fail to grasp a generalization about the operation of non-equivalent rules accounting for equivalent constructions across languages, such as (11) and (13) or (11) and (14). Such a generalization could be easily made and appropriate principled ways of matching equivalents such as (11) and (13) as well as (11) and (14) stated if longer stretches of the text such as (15) were possible to examine. Classical contrastive analyses by failing to match equivalent sentences across languages also fail to grasp important generalizations concerning the operation of rules in the compared languages in those cases when a set of rules in L_i cannot be matched with an equivalent set of rules in L_j.

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ON THE SO-CALLED "THEORETICAL CONTRASTIVE STUDIES"[1]

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Fisiak (1973) has introduced the term "specific-theoretical contrastive studies" (hence TCS). These studies were defined as giving "an exhausting account of the differences and similarities between a given pair of languages". "Specific-theoretical studies" were distinguished from "general-theoretical studies", which deal with general methodological principles of contrastive work and "applied studies", "general" and "specific". Applied contrastive studies are supposed to be a part of applied linguistics and should direct the comparison of two languages toward some specific purpose, as, for example, the explanation of interference errors.

In this paper I would like to examine certain methodological aspects of the of TCA (theoretical contrastive analysis — the terms "studies" and "analysis" are used interchangeably here). In particular, I will be interested in its potential explanatory power and the contribution TCA can make to descriptive linguistics.

It appears that from the methodological point of view TCA is a very peculiar field. This peculiarity may be an underlying cause of much of the criticism that has been directed lately against CA. The most important and distinctive methodological feature of TCA is that it does not provide us with any original explanatory theory which TCA and no other branch of linguistics can provide. In this sense it is not an explanatory science. What TCA provides is a set of observations concerning what may be called contrastive facts. These are mostly of the following types:

1. a) L_1 has feature α where L_2 has feature β

1. b) L_1 has feature α and L_2 does not.

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[1] The present paper is a revised and expanded version of the paper read at the 5th Polish-English contrastive conference at Ustronie, December 12, 1973.

In an explanatory science such a set of observational statements is usually supplemented by a theory that explains the observed facts by answering the question: why do those facts occur? Can there be an explanation for contrastive facts? Of course such an explanation can exist but the theoretical statements which will occur in its premises will not be different from those required independently by some other linguistic branch. Thus the explanations that contrastivists are possibly seeking can be easily, almost mechanically, constructed assuming that the researcher has at his disposal full and adequate grammars of compared languages and the general theory of language.

To demonstrate this point let us provide an explanation for 1 when 1 concerns syntax. Four possibilities come to mind. They can be presented in a very informal way as:

A. It is so that 1.a) because in L_1 there is a rule A that generates structure X having the property α where in L_2 there is a rule B that generates structure Y that differs from X in that it has the property β where the former had α

It is so that 1.b) because in L_1 there is a rule A that generates structure X that has a property α and there is no such a rule in L_2.

where α, β=properties of syntactic structures

B. It is so that 1.b) because the rule A that generates structure X with the property α is restricted by a set of exceptions (conditions) different from the set of exceptions (conditions) to the rule A in L_2

or It is so that 1.b) because the rule A in L_1 is dependent on certain other rules that apply before it and either restrict or widen the domain of its application (bleed or feed it) and that have no counterparts in L_2, or their counterparts are restricted in a different way

where α, β=properties of syntactic structures.

A good example of B is the one given in König (1970). Relative clause reduction and the subsequent shift of the unreduced material to the front of the relativized noun phrase is much less restricted in German than in English because of the word order rule that shifts the verb to the end of the relative clause. If the verb is a participle, it would allow the operation of the two rules mentioned above. In a similar situation in English the application of the relative clause rule and the adjectival shift is blocked whenever there is some element within the relative clause that follows the participial form of the word. In both languages the process leading to the construction

1) *Der Junge der durch den Hund gebissen worden war.*
2) *Durch den Hund gebissener Junge.*
3) *The boy who was bitten by a dog.*

4)* *The bitten by a dog boy.*

of adjectival constructions is constrained in the same way (it applies whenever the relative clause ends with an adjective or participle) but in German it is "fed" additionally by the rule of subordinate clause word order which does not exist in English.

C. It is so that 1. is possible because α and β are not universals, where α, β=rules (s) or category(ies).[2]
D. It is so that 1.a) because (a) — it is always so that whenever γ occurs in a language, α occurs too; whenever δ appears, β is present.
(b) γ occurs in L_1 and δ in L_2
It is so 1.b) because (c) — (a) holds (d) γ occurs in L_1, but not in L_2.

From the above we can see that

(a) the statement following "because" in C has to be present as a part of the general linguistic theory, one of the most important aims of which is to show to what extent languages can differ and to what extent they cannot.

(b) (a) in D is also to be found within general linguistic theory in the section which deals with implicational universals.

(c) what follows "because" in A and B is nothing other than simple conjunctions of theoretical statements to be found within the theories of grammars of the languages to be compared. The general pattern of argumentation here is as follows. The reason why there is a syntactic structure which has the property α in L_1 is because the grammar of L_1 has the property(ies) X, and the reason why there is a syntactic structure with the property β in L_2 is because the grammar of L_2 has the property(ies) Y.

As has been demonstrated, TCA is a peculiar field where no new, original explanatory theories are constructed to account for the painstakingly collected body of data. The reason for this is that the theory needed to account for it is, theoretically at least, easily available, constituting a part of the general and specific theories of language.

It should be clear that the results of TCS, contrastive facts, do not explain anything by themselves, much less interference errors. In an empirical science to explain means to infer logically from the conjunction of statements of which at least one is a general, theoretical statement (referring to some general regularity, law), a statement describing a particular fact to be explained. In case of a language error explanation the necessary general statement will be taken from the psycholinguistic theory of language learning and use. The role that TCA plays in relation to error analysis is to supply some, but not all, premises for the explanations of errors.

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[2] In the form given here C looks like a pseudo-explanation. Actually, it can be interpreted as an *ad-hoc* constructed trivial conclusion following from the statement describing the fact which needs explanation. Ideally, the statement denying universality to some language feature should be justified independently from the observation it is needed to account for (and which otherwise provides a sufficient justification for it). Practically, this means that we are pointing out to the fact that there is another pair of languages which differ by the same feature. Of course, what the question C answers is not "why 1? ' but "why is 1 possible ?".

An important but equally ancillary function of data collecting has TCA in relation to linguistics "proper". This has been pointed out by several contrastivists (see, for example, Selinker 1971). Let us examine this possibility in a more detailed way.

TCA, in my opinion, can and should contribute to a) linguistic typology, b) general linguistic theory, c) grammatical descriptions of particular languages. Its contribution is again of a peculiar type in that it is accidental or non-TCA-specific. In an ideal situation the linguistic theory utilized in TCA, both general and that of particular languages, should not need any modifications. It appears, however, that many of the theoretical linguistic issues may be solved only when data taken from more than one language is considered. In TCA we are supposed to operate with adequate descriptions of two languages, based on the same general theory. In reality, either one of the grammars or the general theory may be inadequate, due to its formulation without the necessary recourse to the data of other language, when such a consideration might have led to some modification. In this way a contrastivist reformulation has a chance to reformulate defective existent descriptions. This reformulation, however, will not be done by the linguist as a contrastivist, but as either a theoretician of language or as a grammarian of one of the languages compared.

Another type of contribution occurs when a comparison of two languages suggests to the linguist a relevant linguistic generalization, the formulation of which does not necessitate the consideration of the data from more than one language. Again, when a contrastivist attempts to formulate such a generalization, he is acting no longer as a contrastivist, but as a theoretical linguist.

Let us illustrate the two types of contributions with examples. The second type of contribution may be made by TCA to the theory of implicational universals. When comparing a synthetic language like Polish with an analytic one like English, we notice that the former has the "scrambling" rule (the rule that accounts for the so called "free" word order) while the latter does not. Such comparison may suggest that there is perhaps some connection between a language's being analytic and its not having the rule in question (actually, the connection is quite obvious and, consequently, the example trivial). The complementary distribution of two language features (lack of inflectional endings and free word order) in more than one, and possibly all, languages suggests that the appearance of one in L_1 and the other in L_2 is not a mere coincidence. Of course, this fact might be explained by studying L_1 alone and showing that if it were to contain both features, it would lose its communicational feasibility. The chances are, however, that except in an obvious case, like the one above, the systematic and necessary nature of the co-occurrence relation between two features will be overlooked unless confirmed by the examination of more than one language.

Let us turn now to cases where crosslinguistic considerations are necessary for verifying theoretical linguistic hypotheses.

Such a situation, too obvious to require a discussion, exists in linguistic typology. As to the general theory of language, TCA may provide a testing ground for claims assigning a universal value to a particular syntactic rule (set of rules) or category(ies). To test a hypothesis of this sort would be to search for possible counterexamples. If there are none, the hypothesis is not refuted and, hence, has to be accepted. Naturally, such a verification can be done and is done outside TCA proper. Ideally, a general claim of this type should be tested on a number, possibly all, languages, within general theoretical linguistic studies. A multilingual comparison would go beyond the scope of CA, which is limited to the comparison of just two languages at a time.

I would now like to present briefly what, in my opinion, is a non-trivial example illustrating the type of argumentation described above. It shows how an apparent counterexample ceases to be one under deeper analysis.

I will claim that modal adverbs in English have a deep structure position which is essentially identical in terms of node configuration with that of auxiliary elements. The tentative universal hypothesis to be made in this connection is:

A) The structural position in Diag. (1) is connected, in the case of modal adverbs (and probably in case of some modal verbs), with a special status in the focus-presupposition arrangement of the sentence. Modal adverbs, when in a main clause and not under contrastive stress, are neither presupposed (do not belong to the presupposition of the sentence) nor a part of the focus phrase of the sentence.

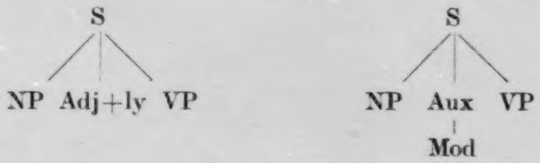

Diagram (1)

The validity of the second part of the condition stated above can be shown by making a simple declarative sentence 5) containing a modal adverb, the "natural answer" of a question.

5) *I will probably go to France.*

It appears that in such a situation the modal adverb, a) is never identical with the element questioned about, i.e., focus, b) may be absent from the presupposition of the question[3]. Since a question shares its presupposition with the declarative sentence that is an answer to it, the modal adverb in 7) is not presupposed.

5) is not a "natural answer" to 6), but rather to 7).

6) *Is it really probable that you will go to France?*

7) *Where will you go?*

There is an apparent counterexample to a) in Polish. We can find here examples of modal adverbs which, in the conditions specified in a) (main clause, normal intonation pattern), seem to function as the main foci of sentences, upon which the intonation center has been placed. There is no presupposition-focus difference between 8) and 9).

8) *Jest rzeczą oczywistą, że on tam poszedł.*

9) *Oczywiście, że on tam poszedł.*

In my opinion such a difference exists between 8) and 10).

10) *On tam oczywiście poszedł.*

The elements which are being asked about in a "natural question" for 8) and 9) are "rzecz oczywista" and "oczywiście" respectively. The rest is presupposed.

11) *Czy to jest naprawdę oczywiste, że on tam poszedł?*

11) is not a "natural question" to 10).

---

[3] It is not so (contrary to the observation in Katz and Postal (1964)) that modal adverbs are never found in questions.

Consider the following sentences

Where will you possibly go?
Will you surely go there?

The first question can be roughly paraphrased as

I want you to tell me where you suppose you will go.

In this case, the modal adverb belongs to the presupposition of both the the question and a declarative sentence like 5), which may be regarded as an answer to the question. As we can see, 5) is ambiguous in respect to its focus-presupposition arrangement. The second interpretation, relevant to the argument, occurs when in the contextually preceding ("natural") question there is no mention as to the modal attitude of the interrogated person towards the assertion he is expected to make, i.e., no modal adverb is present, as in 7). In such a case, the fact that the speaker of 5) is not sure about the place where he wants to go is not a part of knowledge common to him and the speaker of 7) before 5) is being uttered.

Yes. I will surely go there.

For a more detailed discussions of related problems see Zabrocki (1973).

The counterexample is not a real one, however, under closer scrutiny. The adverb in 9) has a different surface structure position from that in 10). This difference can be demonstrated when we analyze the derivational history of 9).

There are syntactic facts that seem to indicate that type 9) sentences are related to underlying structure (2) by the transformational process which I would call pseudoadverbialization. The embedded clause in (2) has been extraposed from the subject position.

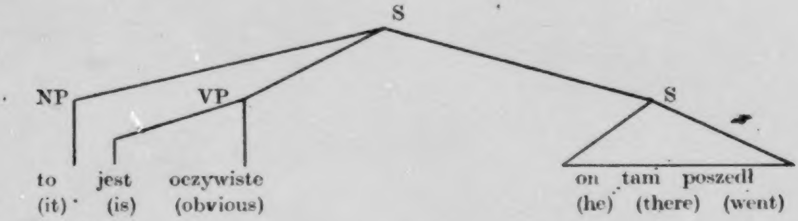

Diagram (2)

The rules that apply to (2) are, in this order, "to jest" (it is) deletion and pseudo-adverb suffix addition (pseudo-adverb formation); the latter is obligatory whenever the former has been applied.

Only under such a hypothesis can we explain in a principled way the fact that those, and only those lexical items that are exceptions to pseudo-adverbialization appear in structures resulting from the application of "to jest" deletion only.

I a) Jasne, że sobie tego nie życzę.	II a) *Jaśnie, że sobie tego nie życzę
b) *Oczywiste, że	b) Oczywiście, że ....
a) Możliwe, że	a) *Możliwie, że ....
b) ?*Pewne, że	b) Pewnie, że ....

In our analysis I a) constructions are the result of exceptions to pseudo-adverb suffix addition. Thus, there are no corresponding adverbial forms II a).

I b) constructions are impossible because the adjectives here are not exceptions to pseudo-adverb formation rule: the adverbial suffix has to be added, once "to jest" has been deleted.

In the examples above, the analysis of the Polish data did not influence the way in which the grammar of English was formulated. Such a possibility could exist.

Whether it is legitimate to extrapolate the internal evidence of one language to the grammar of another one appears to be a controversial matter. Even though such procedures are quite commonly used in the current grammatical research, serious objections have been raised. Commenting upon Ross's analysis of auxiliaries Chomsky (1972:122) writes: "Arguments concerning the German auxiliary bear on English only if one is willing to make some general assumptions about translatability of rules that seem to me unwarranted".

It seems that there are at least two cases when such extrapolation is methodologically correct. In the first case the following preconditions have to be met.

a) The particular syntactic hypothesis concerns an underlying structure of some sentence in L_1 that has a translation equivalent sentence in L_2.

b) Accepting the generative semantics hypothesis, we assume that there is a certain abstract level of syntactic analysis where the two linguistic expressions which are simple (the term needs some further specification) paraphrases of each other are structurally identical. The cases in which the equivalence must be accounted for by some logical equivalence rule (such as for example De Morgan's Law) and not by the identity of the underlying structure will have to be excluded.

c) The proposed hypothesis concerns this level of analysis.

A tentative example of such an argument may be given in relation to the deep structure analysis of English sentences like 12) containing what may be called after Greenbaum (1969) stylistic sentence adverbials.

12) *Frankly speaking, he is a crook.*

One may propose that in the underlying structure of 12) there is a conditional construction 13).

13) *If I may speak frankly I would say that he is a crook.*

There is evidence in Polish which supports this analysis, but which cannot be found in English. The word "to"[4], which usually appears at the beginning of the main clause in the conditional constructions, can optionally appear after the adverbial phrase, which is a semantic and structural equivalent of "speaking frankly".

14) *Szczerze mówiąc, (to) on jest oszustem.*

If the presence of "to" in 14) is to be explained, 14) will have to be connected to the structure underlying a conditional sentence 15)

---

[4] Obviously, the "to" we are dealing with here is a different thing from the homophonous pronoun (mentioned earlier).

15) *Jeżeli mam mówić szczerze, to powiem że on jest oszustem.*

If this argument is regarded to be valid for English as well, we get a strong evidence supporting an analysis that connects 12) and 13). Of course, such an extrapolation is only possible if there is no evidence in L_1 which would in some way contradict the conclusions reached within L_2.
In other words, the two languages would first of all have to be thoroughly analyzed in their own terms.

The above conclusion applies also in the case of the second type of extrapolated argumentation. It is different from the first one, because the problem that is being addressed does not necessarily concern a very deep level of the underlying sentence structure.

The structure of the argument is as follows:

a) A general statement is formulated which says that the nature of a particular grammatical process is the same in all languages where it appears (in the example below, it is the process of infinitivization, which is a relatively low level syntactic phenomenon).

b) statement a) is treated as a universal hypothesis; all attempts to falsify it on the basis of the analysis of the infinitivization process in both languages fail,

c) there is, however, a theoretical possibility of falsification, since the analysis of one of the compared languages (English) leads to two alternative solutions, neither of which can be invalidated on empirical grounds.

If one of them is chosen, our hypothesis in a), as to the unitary nature of the phenomenon, is still valid; and if the other one is chosen, it has to be rejected.

d) in such a case, we can change our general hypothesis a) into an assumption (we may do it since it is impossible to falsify it; in other words, it cannot be shown to be wrong),

e) on the basis of this assumption we are able to choose that particular solution (of the two available) that agrees with it.

The following is a developed version of such an argument, that, I think, is methodologically valid.

It has been proposed by Thorne (1973) that the distribution of infinitive complementizers in complement sentences in English should be connected to the semantic fact that clauses which allow their main verb to be infinitivized are in a non-indicative mood. Then, he proposed that in the underlying structure of embedded clauses in the indicative (i.e., "that" clauses) there is always a superordinate clause with the predicate "the case". The same structure is said to underlie 16) and 17).

16) *I said that John is wise.*
17) *I said that it is the case that John is wise.*

In such a theory, there are two possible ways in which the relation between the rules that lead to the removal of the subject NP from the embedded clause (Equi-NP deletion and subject raising) and the transformational process of infinitivization can be explained.

The fact that whenever an infinitive appears the subject is removed is simply explained by showing that it is only in subjunctive clauses that the conditions for subject removal are satisfied ("the case" is analyzed as a non-subject raising predicate). The relationship between subject removal and infinitivization is thus presented as an indirect one, mediated by the way non-indicative mood is represented in the deep structure.

An alternative theory, which has been proposed in Kiparsky and Kiparsky (1970), links the two phenomena directly and explains infinitivization as a consequence of subject removal, the latter being a necessary and sufficient precondition for the former[5].

It seems impossible to decide which of the two theories (which might be interpreted as attempts at the general explanation of the phenomenon of infinitivization) is better founded empirically on the basis of the English data alone. When the correctness of the "case" analysis is assumed, one might imagine a language in which evidence can be found favoring one of those solutions on empirical grounds.

It would be more advantageous to link infinitivization with subject removal rather than directly with the mood of the clause, if there was more than one way of expressing the subjunctive in a language and if the particular fact of a clause's being in the infinitive and not in some other subjunctive form always coincided with the fact that the subject had been removed from the clause.

Such a situation exists in Polish. The subjunctive can be expressed either by adding the particle "by" to the "że" complementizer and making the verb take a past tense form, as in B, (or by infinitivization as in 18). The last possibility is realized only when conditions are satisfied for Equi-NP deletion (no subject raising in Polish).

18) *Janek chce wyjechać do Ameryki*. (Equi-NP deletion)
19) *Ja chcę, żeby Janek wyjechał do Ameryki*.
20) **Ja chcę Janek wyjechać do Ameryki*. (no Equi-NP deletion)

---

[5] What was really claimed in Kiparskys (1971) was that the occurrence of the infinitive is connected with the fact that the subject-verb agreement rule cannot apply. The rule is blocked not only when the subject is removed, but also when it is made into a prepositional phrase by the addition of the preposition "for". The existence of "for ... to" constructions can be explained in this way. It seems that no serious consequences as to the discussion in the present paper follow from this simplification.

Under the assumption that the same process leads to the formation of infinitives in English and Polish, the solution adopted for one language is relevant for the second one, too. The assumption is not unwarranted since it can be tested against the evidence in both languages. Because it is impossible to show, on empirical grounds, that in English infinitivization should be made directly dependent on the mood of a clause (the only way to show that the assumption is wrong) the crosslinguistic generalization concerning infinitives can be accepted.

The solution of the general problem of infinitivization has an effect on the way the grammar of English has to be formulated. The rule that inserts an infinitive complementizer will have to have its structural index formulated differently (the scope of the rule will be limited to a single clause. The fact whether there is a superordinate "the case" clause in the same sentence will be irrelevant now).

The argument can be presented graphically

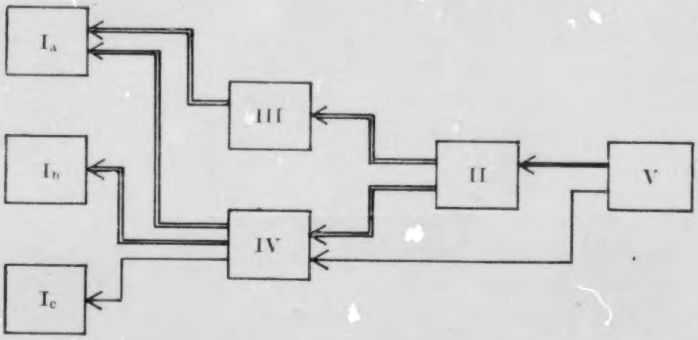

Diagram (3)

where I_a, I_b, I_c — observations
II, III, IV, V — theories

I_a (English-hypothetical)

	infinitive
indicative	—
non-indicative	+

I_b (Polish)

	infinitive	
indicative	—	
non-indicative	+	or other subjunctive form

I_c (English, other languages)

	infinitive
indicative	+ or –
non-indicative	+

II — "case" is the main predicate in the superordinate clause in which all and only indicative sentences are embedded.
III — the rule forming infinitives applies on the condition that the verb to be infinitivized does not appear in a clause embedded within the "case" sentence.
IV — the rule forming infinitives applies on condition that there is no subject in a sentence (removed transformationally)
V — infinitivization is the same phenomenon (determined by the same set of factors) in all languages where it occurs.

Notice that while the truth of II and consequently III ultimately depends upon whether the language facts are those in I or I_a, the truth of IV does not. If in reality I_c holds (and it is actually highly probable that it does[6]) then II and III will have to be rejected. III is inadequate for obvious reasons. The absence of "the case" clause cannot be used to trigger the infinitivization process, since infinitives may also occur when the clause is present[7]. II cannot be salvaged either. Since III has been rejected, II would have to appear in conjunction with IV, and sentences in the indicative with an infinitivized verb could not be generated because of the presence of "the case" clause blocking subject removal rules (if we stipulate that it does not block them, then II becomes totally irrelevant for the discussion of infinitives).

On the other hand, IV and V can be maintained, if we can show that the subject is missing in the indicative infinitive clauses.

Let us sum up the main conclusions of the present paper.

1. TCA differs from other branches of descriptive linguistics in that it does not aim at creating any original explanatory theory. It merely collects data supplying premises for the explanations offered by error analysis.

2. The consideration of contrastive data might suggest solutions to various linguistic problems, especially those which cannot be solved without the analysis of evidence taken from more than one language.

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[6] There seem to be sentences which are indicative and where the subject NP has been removed and a verb in the infinitive is present. Consider the subordinate clause in the following sentence:

To be unable to do it did not embarrass him.

The clause is presupposed, which means that there is no uncertainty as to its truth value — the feature usually associated with the subjunctive. No difference, in this respect exists between the sentence above and the one below:

That he was unable to do it did not embarrass him.

The evidence from Latin points out to the same conclusion. "Verba dicendi" obligatorily demand ACI constructions, no matter whether the infinitivized verbs are rendered in Polish translations as indicative or subjunctive forms.

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[7] The criticism of III could be avoided by replacing II by a weaker claim which would allow certain semantically indicative clauses not to be embedded in the "case" sentence. In such a case, however, the "case" hypothesis risks a danger of degenerating into a pseudo-explanation of a very *ad hoc* type where the only justification for the postulation of a superordinate "case" predicate for a given clause is the fact that the clause has the main verb in infinitive.

SOME REMARKS ON ELLIPSIS IN POLISH AND ENGLISH[1]

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1. *A command of ellipsis is part of knowing a language*

> ... [Karras] Felt for the pulse. And in a wrenching stabbing instance of anguish Karras realized that Merrin was dead... Then he saw the tiny pills scattered loose on the floor. He picked one up and with aching recognition saw that Marrin had known. Nitroglycerin. He'd known. His eyes red and brimming, Karras looked at Merrin's face... (Blatty 1972: 388).

In the sequence "...Merrin had known. Nitroglycerin.", any reader that recognizes nitroglycerin as a medicine for severe heat conditions will infer that *Merrin had known that he had a severe heart condition and that he might die from it*. And this is just the inference the author intends us to make.

Presented with such a passage, a transformational grammarian might claim that the clause *Merrin had known* had a deep structure that included a further embedding, *that he had a severe heart condition and might die from it*, and that there was a transformation that eliminated it from the surface structure, an optional rule that deleted the object of *known* in the presence of the noun *nitroglycerin*, provided that the object contained an assertion about heart conditions.

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[1] A revised version of the paper presented at the sixth international conference on contrastive linguistics (Kazimierz, 1974). The authors are grateful to the many people at the conference who gave helpful comments, particularly to Nina Nowakowska, and most of all to Wayles Browne. Those who read the preliminary version can recognize how much the dialogue has helped us.

The Nitroglycerin Deletion Rule (optional)

SD:	*X know*	S	*X nitroglycerin X*
	1	2	3
SC:	1	ø	3

Condition: 2 contains an assertion about severe heart conditions.

As an alternative to this approach, we will say that what it is that Merrin had known is not specified in the grammatical structure at any level, and that part of the power of this passage is that the author has left some work for the imagination of the reader. Indeed, he does not leave room for any more than one interpretation, but at the same time he has encoded only part of his idea into linguistic form. From this point of view there is a distinction between what is entailed by a grammatical structure and what is inferred from it (cf. Bolinger 1971 and Kirsner 1972).

Merrin had known meets the definition of ellipsis given by Shopen (1973) in that only part of a proposition is encoded into linguistic form: the propositional head *know* is present without a constituent to represent one of its arguments. Referring to the notion of propositional structure with a hierarchy of predicates and arguments, we can distinguish two kinds of ellipsis, *functional ellipsis* with constituents serving as arguments without a predicate to govern them, as can be the interpretation for the noun *plaszcz* (coat) in the Polish dialogue:

Jacek!
Co?
Płaszcz.
Dobra jest.

(Jacek! What? The coat. All right.)

and *constituent ellipsis* where a predicate is expressed without all its arguments, as in *Merrin had known* above, or in the Polish expression *on się nie zgadza* (he does not agree), as in the dialogue:

Co się stało?
On się nie zgadza.
No to co?

(What happened? He does not agree. So what?)

Examples of this sort abound in the most natural use of language in any culture. People who speak and write a language well do not want to bother their audience with information they already have or that they can find out easily for themselves; in addition, it is sometimes preferable to leave thoughts in one piece rather than to analyze and break them down to the level of word meanings.

Ellipsis is rule governed. Knowing when it is possible and appropriate to leave parts of a proposition out of an utterance is an important aspect of knowing the language; the relevance for the theories of language acquisition and second language learning is obvious.

Constituent ellipsis is allowed with some verbs, but not others (in non-anaphoric ellipsis):

POLISH	ENGLISH
On zrozumiał.	He understood.
*On oczekiwał.	*He expected.

Parts of speech in morphologically related words differ in their capacity for ellipsis. There is a general tendency for nouns and adjectives to allow more ellipsis of their arguments than verbs.

ENGLISH

The family is in financial straits because

*John wastes. (VERB)

John is wasteful. (ADJECTIVE)

POLISH

Rodzina ma kłopoty finansowe,
(Family) has problems financial

*ponieważ Jacek marnuje. (VERB)
because Jacek wastes.

z powodu marnotrawstwa Jacka (NOUN)
because of wastefulness of Jacek).

In answers to yes-no question, Polish and English differ in the possibilities for ellipsis. Note that in contrast to the examples just above, we enter here into the area of anaphoric ellipsis, that is, ellipsis where there is linguistic context providing an antecedent. In English, auxiliary verbs may be used freely to stand for a whole verb phrase[2].

Has John been spending all his money on flowers for his girl again?
Yes, he has.

In Polish, you would generally just say *Tak* (Yes) in a situation like this, or else give an answer that repeats the main verb. First of all, Polish has fewer auxiliary verbs; moreover, except for modals, Polish auxiliary verb (*być*, *zostać*) cannot stand alone in answers of this kind.

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[2] We would classify this as constituent ellipsis, though nothing hinges on this distinction here. Cf. Morgan 1973, for an interesting discussion of short answers to questions in English. Morgan develops arguments in favor of deletion rules as a means of deriving short answers. His position is not directly in opposition to ours since we have argued against the use of deletion rules in nonanaphoric ellipsis (cf. Shopen 1973). It is nevertheless our belief that it will be possible to rule out deletion rules from the theory of syntax altogether.

Czy Jan został aresztowany?
(Has John been arrested?)

Tak.	(Yes.)
*Tak, on został.	(Yes, he has.)
Tak, on został aresztowany.	(Yes, he has been arrested.)

On the other hand, ellipsis of objects is common in Polish answers in a way that is not possible in English. In non-anaphoric ellipsis, neither the Polish verb *pożyczyć*, not its English equivalent *lend* allow ellipsis of a direct object.

Czy był on hojny?
*Tak, on pożyczył.

Was he generous?
*Yes, he lent.

In the anaphora of a question and answer dialogue, however, where the same verb is used in both sentences, Polish allows object ellipsis with any verb, even with verbs where it would not otherwise be permissible, e.g. *pożyczyć* again.

Czy on pożyczył pieniądze?
Tak, (on) pożyczył.

Did he lend the money?
*Yes, he lent.

Of course, the short answer *Yes, he did* is available in English, where the main verb is avoided altogether, and thus the object of that verb as well. For various reasons, we believe that the Polish answer with the main verb, *Tak*, (*on*) *pożyczył*, and the English *Yes, he did* are not equivalent to each other, either semantically or stylistically, so that altogether short answers in Polish and English appear to us as different systems, which merit special attention in teaching situations.

It is important to realize that the object ellipsis noted above in Polish is a special feature of short answers where the same verb has been used in the question. It is *not* simply a matter of whether an antecedent is present for the ellipsed object. If the same verb is not present in both the question and the answer, the usual constraints on object ellipsis apply. Compare:

Czy dostali pieniądze?
*Tak, (on) pożyczył.
Tak, on je pożyczył.

(Did they get the money? Yes, he lent it (to them).)

2. *The scope of contrastive analysis studies*

It seems to us that contrastive analysis of languages can be viewed from two perspectives, the most basic one limited to grammatical description, and the second, one that includes grammatical description, but also the notion of style and language as a means of communicating ideas. In the first, contrastive analysis is related most significantly to a universal theory of grammar and to language typology; the second can hope to make a contribution to language teaching.

It is our view that ellipsis has special relevance to grammatical theory in that it is an important aspect of the grammatical structure of languages and also because there are important consequences for the grammatical model when one includes a systematic account of the shorter things that people say as well as the larger ones. There are in particular important consequences for how context-sensitive constraints can be defined in the generative model (cf. Shopen 1972b, and forthcoming). Our position is that non-anaphoric ellipsis—that is to say, ellipsis without any linguistic context to fill the parts of propositions that have been left out—does not *come from* a non-elliptical source, but rather should be generated directly in the base component of a generative grammar. Thus, when somebody says *kawa* (coffee) as the sole means of conveying a message, the extent to which grammatical knowledge is involved has to do with the noun phrase *kawa* and no more. For the rest of the message, some other kind of cognition takes over.

A second language teacher is concerned with teaching how to encode ideas into linguistic form with a new grammatical system, and perhaps with some of the style or appropriateness practiced in the culture from which the language comes. If we are correct that ellipsis represents a distinct way of encoding ideas into grammatical form, then ellipsis has special relevance. To the extent that the native language and the target language have the same grammar of ellipsis, they may still have different stylistic conventions for the use of ellipsis. And, of course, the grammatical possibilities for ellipsis can be different as well. The grammatical study is primary, because the notion of style is meaningful only when it is clear what possible ranges of choices are allowed by grammar.

3. *The grammatical analysis of ellipsis*

3.1 *The distinction between entailment and inference*

If elliptical constructions are thought of as remnants of non-elliptical constructions that have undergone deletion rules, then their form and meaning can be said to be accounted for in the analysis of non-elliptical utterances. In our view, however, elliptical utterances deserve status in the grammar in their own right since they have distinctive syntactic and semantic properties.

While the study of context is of great interest in its own terms, a central concern in linguistic research has been and must remain the characterization of the grammatical properties of utterances independently of the contexts in which they are used. Without knowing them in advance, human beings can communicate in a potentially infinite number of contexts, and with a finite amount of knowledge. From this it follows that words and larger structures must have conventional meanings that they carry with them wherever they go. These are the grammatically determined, entailed meanings, as opposed to the parts of messages that are inferred in specific contexts. It is just in this respect that the principle of recoverability of deletions (Katz and Postal 1964) is important. In the kind of ellipsis that we are discussing here, the speaker relies on shared knowledge and perception of context for the completion of the intended message. In terms of their grammatical properties, *Płaszcz* (The coat), or *On się nie zgadza* (He does not agree) can convey a potentially infinite number of messages. The criterion of recoverability correctly prevents us from deriving these utterances from non-elliptical sources by deletion rules.

The grammatical analysis of ellipsis then should be concerned with syntactic and semantic properties of the construction that actually appear in utterances. We know that *On się nie-zgadza* is elliptical, because of the meaning of *zgadzać się* (to agree). We know that *Płaszcz* expresses an incomplete proposition because it has the form of a noun phrase.

Noun phrases must always be interpreted as subparts of propositions even when they have the same propositional content as sentences. Compare *Tata powrócił* (The father returned) and *Powrót taty* (The return of the father). The sentence *Tata powrócił* can stand alone and have independence (cf. Jespersen 1924: 305ff.) in the sense that its propositional content can carry the illocutionary force of a statement or a report. Not so for the noun phrase *Powrót taty*: its propositional content can only be interpreted as a subpart of some larger proposition, and only this larger proposition can carry illocutionary force and constitute a message, for example, the noun phrase answers a question such as *Co uszczęśliwiło dzieci?* (What made the children happy?), or it serves as a title for a ballad[3].

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[3] It is because of their distinct semantic properties that there is a tendency to use noun phrases for titles in a number of European languages (cf. Kruppik 1970; Rywacki 1973; cf. Shopen 1973 for a discussion of the semantics of titles). Note that this practice is not universal. In Bambara, a language spoken widely in West Africa, there is a tradition of using sentences for the titles of songs and poems much in the manner of „Szła dzieweczka do laseczka".

3.2 *Obligatory ellipsis*

Once one concentrates on the analysis of the words that actually appear in elliptical utterances, a number of interesting problems emerge. While constituent ellipsis is sometimes disallowed by grammar, e.g. **Tomek zganił* (Tom blamed), there are other cases where it is compulsory. Compare the Polish verbs *przemienić się* (to change) and *stać się* (to become). The semantic structure of *przemienić się* (to change) can be said to be characterized by a three-place predicate CHANGE, where by convention the first argument (x) is the THEME, or entity that changes from one state or location to another, the second (y) is the SOURCE, or the starting point for the change, and the third (z) is the GOAL, or end point of the change (cf. Gruber 1965).

[CHANGE x y z]

Książę	przemienił się	z *żaby*	w *poczwarę*.
x		y	z
(The prince	changed	from a frog	into a monster.)

It is possible for the SOURCE state to be named in the subject position:

Żaba	przemieniła się	w *poczwarę*.
xy		z
(The frog	changed	into a monster.)

The lexical entry for the verb *przemienić się* (to change) can then capture the possible correspondences between syntactic constituents and semantic functions.

przemienić się

[NP________(PP) (PP)]
x y z
[NP________(PP)]
xy z
[CHANGE x y z] Abstract change of state.

If one chooses to express the same concepts with the verb *stać się* (to become), the possibilities for syntactic expression are more limited. Speaking of the same situation, one could say:

Książę	stał się	poczwarą
(The prince	became	a monster.

but not

*Książę	stał się	z żaby	poczwarą
(The prince	became	from a frog	(to) a monster.)

One can express the SOURCE in subject position, but not in the verb phrase. As the first approximation, the lexical entry for *stać się* (to become) might be presented as follows:

stać się

$$\begin{bmatrix} [\mathrm{NP}\ \underline{\qquad\qquad}\ \mathrm{NP}] \\ x(y) \qquad\qquad\quad z \\ [\text{CHANGE } x\,y\,z] \text{ abstract change of state.} \end{bmatrix}$$

3.3 *Musical chairs*

Constituent ellipsis of a different sort is represented by what Shopen (1973) calls the Musical Chair Phenomenon. This occurs when a propositional head, such as a verb, governs a certain number of arguments, all of which can be syntactically, but not all at once within an ordinary simplex clause. Consider the Polish counterpart to Shopen's example with *explain*. The concept of an explanation includes the notion of a problem as well as the explanation of that problem, but it is not possible to express both of these elements freely with separate constituents in an ordinary simplex clause.

Uczeń wyjaśnił nauczycielce swą nieobecność.
(The student explained to his teacher his absence.)

Uczeń wyjaśnił nauczycielce, że był chory
(The student explained to his teacher that he had been ill).

*Uczeń wyjaśnił nauczycielce swą nieobecność,
(The student explained to his teacher his absence
że był chory.
that he had been ill.)

It is striking that equivalents of the verb *to explain* in a number of languages, including Polish and Chinese, appear to have the same Musical Chair property. It is unlikely that this is an arbitrary syntactic restriction. It seems rather that the concept of an explanation is in some way 'multi-dimensional' for the speakers of the language, so that not all of the arguments can be expressed simultaneously within an ordinary simplex clause. Special syntactic devices, however, can be employed to get all the arguments on, for example, a preposed prepositional phrase that topicalizes one of the arguments or a subordinate clause employing an additional verb, as

Jeśli chodzi o jego nieobecność, uczeń wyjaśnił
(As regards his absence the student explained
nauczycielce, że był chory.
to his teacher that he had been ill.

Uczeń wyjaśnił nauczycielce swą nieobecność
(The student explained to his teacher his absence
mówiąc jej, że był chory.
by saying that he had been ill.)

Both these Polish examples involve a major break in the intonation contour of the utterance. It would be reasonable to say that these are not just simplex clauses, but simplex clauses plus adjuncts. Somewhat unidiomatically, it is also possible to use the pronoun *tym* in the instrumental case, before a pause, and then have a subordinate clause follow the pause in apposition to the pronoun:

Uczeń wyjaśnił nauczycielce swą nieobecność
(The student explained to his teacher his absence

tym, że był chory.
by this, that he was ill.

Finally, we should note that the example we have presented allows a paraphrase of marginal acceptability, but with a single intonation contour, with all arguments included. The device that makes it possible is the instrumental noun *choroba* (by (his) illness).

Uczeń wyjaśnił nauczycielce swą nieobecność
(The student explained to his teacher his absence

chorobą.
by illness.)

But not only is such a sentence awkward, it is not representative of a productive phenomenon, since many 'explanations' do not lend themselves to nominal paraphrase, e.g. no such device would be possible to get all the arguments together in a single simplex for the following set of examples:

Uczeń wyjaśnił nauczycielce swą nieobecność.
(The student explained to his teacher his absence.)

Uczeń wyjaśnił nauczycielce, że musiał pozostać
(The student explained to his teacher that (he) had had to

w domu, by pilnować młodszego brata w czasie gdy mama
stay at home to watch (his) younger brother while (his)

była w szpitalu u chorego ojca.
mother was in the hospital with (his) sick father.)

Uczeń wyjaśnił nauczycielce swą nieobecność,
(The student explained to his teacher his absence

że musiał pozostać w domu, by pilnować młodszego
that (he) had had to stay at home to watch (his)

brata w czasie gdy mama była w szpitalu u chorego ojca.
younger brother while (his) mother was in the hospital
with (his) sick father.)

3.4 *Subjectless sentences*

Polish is among those languages of the world which allow free ellipsis of subjects: no independent constituents need appear in subject position, provided the subject is uniquely identifiable from either the linguistic or the extra-linguistic context. The one exception to this generalization is when the subject is a relative pronoun. In English, on the other hand, subject ellipsis is limited primarily to commands (*Go away!*) and questions directed to second-person subjects (*Coming along? Remember him?*).

Shopen (1973) points out that constituent ellipsis can be definite as well as indefinite. Katz and Postal (1964) discussed a kind of indefinite ellipsis in sentences such as *Almost all the contestants have been chosen*. Such sentences can be paraphrased with an additional phrase, *by someone*. But there is also a kind of constituent ellipsis that can only be paraphrased with definite pronouns. *Mary was pleased* could be paraphrased *Mary was pleased by it*, but not *Mary was pleased by something*. The contrast between indefinite and definite constituent ellipsis can be seen in active verb phrases as well. *George sold his car* can be paraphrased *George sold his car to someone*; by contrast, *They blamed Henry* could not be paraphrased *They blamed Henry for something*—the paraphrase could only be definite, as *They blamed Henry for it*.

Constituent ellipsis can be either indefinite or definite, but functional ellipsis, as in *Your necktie* or *In the library* is always definite, which is to say that the rest of the message must be uniquely identifiable in order for the utterance to be acceptable.

We find it striking that in all languages that we know of there can be constituent ellipsis involving objects which is either definite or indefinite, but subject ellipsis is definite. Thus *Wyszedl* (He left) can only mean "He left"; it could never mean "Someone left". For the latter meaning one would have to supply an indefinite pronoun in subject position, i.e., *Ktoś wyszedl*.

Some apparent counterexamples to our claim should be acknowledged and analyzed. On closer inspection, we believe we have cases that seem to strengthen our position. Notice that third person plural subject less sentences can have an impersonal sense in narratives such as the following:

Wiesz co się stało w Paryżu? Ukradli mi walizkę!
(Do you know what happened in Paris? They stole my suitcase!)

It is true that the thief may have been a single person, and the personal identity of the thief or thieves would not ordinarily be uniquely identifiable for either speaker or hearer; however, the sense of this example should be compared to that of the following:

Wiesz co się stało w Paryżu? Ktoś ukradl mi walizkę!
(Do you know what happened in Paris? Someone stole my suitcase!)

When the subjectless third person plural verb is used for 'steal', there is an implication that what happened is typical of what happens in Paris, the people there are held responsible in some sense. Exactly the same effect is achieved by the personal pronoun *they* in English (a definite form):

Do you know what happened in Paris? They stole my suitcase!

as compared to

Do you know what happened in Paris? Someone stole my suitcase!

We conclude that the use of the subjectless sentences in Polish noted here is definite in the same way that the English translations with *they* are definite, and that we are witnessing something like the 'ambient' extension of a personal pronoun meaning discussed by Bolinger (1973).

3.5 *Autonomous elliptical expressions*

Shopen has pointed out that there are productive elliptical patterns in English that are "autonomous" in the sense that they do not appear as subparts of non-elliptical sentences, such that they could be derived from non-elliptical sources by deletion rules alone. The existence of these patterns casts doubt on the very idea of deletion rules (cf. Shopen 1972a for a detailed discussion of the pattern in *Into the dungeon with him*, and Shopen 1974 for the pattern *How about the carburetor?*).

Polish has its own autonomous elliptical properties. Noun phrases used as whole utterances can appear in the nominative, even when the message communicated is such that any non-elliptical paraphrase would require an oblique case. For example, a surgeon in the midst of an operation stretches out his hand to an attendant and says: *Penseta*! (Pincette), even though the full message has to be paraphrased by something like "Proszę pana o podanie mi *pensety*" (I request that you give me the pincette), or "Proszę mi podać *pensetę*" (Give me the pincette, please).

There is a significantly large class of 'impersonal' expressions in Polish that have interesting autonomous properties. The expression *Padało* receives different interpretations depending upon whether it is used anaphorically or non-anaphorically.

Consider the ambiguous sentence:

Dziecko bawiło się w ogrodzie. Padało co chwila.

$$\text{(Child played in garden. } \begin{Bmatrix}\text{Fell}\\ \text{Rained}\end{Bmatrix} \text{ every now and then.)}$$

If an anaphoric reading is given to *padało* with the noun *dziecko* (child) as the antecedent for the ellipsed subject, the reading is:

The child was playing in the garden. If fell now and then.

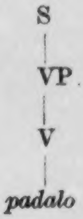
If, on the other hand, *padało* is given a non-anaphoric interpretation, a quite different meaning emerges:

The child was playing in the garden. It rained every now and then.

The expression *Padalo* is all the more interesting because it has neuter gender[4]. This enables it to agree with the neuter noun *dziecko* (child), but the noun meaning "rain" is masculine, so that the non-elliptical way of expressing the meaning "It rained" is:

Deszcz padał
(Rain fell)

To derive the elliptical expression of "It rained" from a non-elliptical source would require a change in gender as well as a deletion. It would appear then that there is not any deletion at all and the expression *Padalo* (It rained) is listed in the lexicon as a homophone with the form *padalo* meaning "fell"; the deep structure for the sentence *Padalo* (It rained) would be simply:



A somewhat similar state of affairs exists for elliptical sentences like *Grzmialo* (It thundered) and *Świtalo* (It dawned). These verb forms are neuter even though the nouns which might be thought to be their subjects (*grzmot* (thunder) and *świt* (dawn)) are masculine. In contrast to *Padalo*, however, there would not appear to be any acceptable non-elliptical source, even of t were granted that more than deletion rules were allowed to derive elliptical expressions from non-elliptical sources. The sentences with subjects expressed are of questionable acceptability.

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[4] A possible objection might be raised to the effect that the *padalo* used in subjectless constructions is morphologically different from the *padalo* that occurs with subjects. We see no reasonable basis for such a view and will assume that it is indeed the same form. A distinction must be made between the past neuter $-o_1$ morpheme (corresponding to the past masc. −ø, fem. *−a*, all neutralized to −ø in the present tense) which forms active finites of the *padalo* type, and the $-o_2$ morpheme found in non-finites carrying passive past meanings, as *widziano* ((one) saw=was (were) seen), *wzięto* ((one) took=was (were) taken). It is only with the latter that something like a 'fourth', or 'indefinite' gender (as well as neutralized number) category emerges as a result of contrasts with *−y* (masc.), *-a* (fem.), *−e* (neut.), *−i* (vir. pl.), *−e* (non-vir. pl.); also are the adjectival functions of *widziany* (*−a*, *−e*, *−i*, *−e*) (seen), *wzięty* (*−a*, *−e*, *−i*, *−e*) (taken) distinct from *widziano*, *podjęto*, clearly verbal forms capable of being followed by direct objects (*widziano go*, one saw him=he was seen, *podjęto decyzję*, one took a decision=decision was taken). No comparable dichotomies are found with $-o_1$. Since $-o_2$ forms always appear in subjectless sentences *only*, and the 'implied' subjects are indefinite (at least in the sense that neither gender nor number can be specified), sentences like *Widziano go w kawiarni* ((One) saw him in the cafe), *Wzięto nas za intruzów* ((One) took us for intruders) must remain outside the scope of the present study of ellipsis.

?Grzmot grzmiał.
(Thunder thundered)

*Świt świtał
(Dawn dawned)

The expressions *Mdlilo mnie* (I was getting sick—word-for-word: sickened me) *Poszlo gladko* ((It) went smoothly), *Chcialoby się powiedzieć* ((One) would like to say) are characteristic of a class of perhaps a hundred more 'impersonal' expressions (always neuter) for which no conceivable subject noun exists (cf. Szober 1953: 303 ff. and Klemensiewicz 1953 : 21–25 for some details of classification). It might be suggested that there are deep structures containing a neuter demonstrative pronoun *to*, similar in its semantic properties to the English ambient *it* (cf. Bolinger 1973). We have just one objection to such a proposal, but it would appear to us to be a conclusive one: that is that when the neuter pronoun actually appears on the surface, the meaning of the impersonal expressions is different—it is highly emphatic.

To padało!
(Did it ever rain!)

To grzmiało!
(Gosh, it thundered!)

?To świtało!
(That was a day for a dawn!)

If it is agreed that *to* is a subject, any possibility of underlying representations with ordinary personal pronouns would have to be ruled out since, and here we take exception to the views of Klemensiewicz (1953) and Szober (1953) for a variety of reasons, their appearance on the surface is unacceptable: *Ono padalo* with the neuter pronoun *ono* could only mean "It fell" with reference to something other than "rain". The example below is also unacceptable when an anaphoric meaning is intended.

Deszcz był zimny. On padał co chwila.
(The rain was cold. It fell every now and then.)

One has the option of using either the masculine form *padal* with an anaphoric interpretation (with *deszcz* understood as the subject), or the neuter *padalo* (perhaps if there is a pause between the two sentences) with a non-anaphoric interpretation, but in either case no subject must be expressed.

Deszcz był zimny. Padał co chwila.
(The rain was cold. It fell every now and then.)

Deszcz był zimny. Padało co chwila.
(The rain was cold. It rained every now and then.)

The grammar of Polish must have a phrase structure rule $S \rightarrow (NP)VP$.

These observations have important consequences for the lexicon and for the theory of context-sensitive constraints in a generative model. If case-marked nouns such as *kawa* and verb forms such as *padalo*, marked for gender and number, have autonomous properties such that they ought to be generated directly without any further linguistic context in the where they constitute whole utterances, then this suggests that inflectional morphology must be entered in the lexicon; furthermore, when the case marking of nouns of the inflection of verbs must agree with a larger linguistic contexts in non-elliptical constructions, the only general formulation of the context-sensitive contraints can be 'analytical' or 'interpretive'. This is to say that transformations cannot be used to synthesize words in order to insure well formed co-occurrences; the word must be viewed as the prime in syntax and the notion of paradigmatic structure must take an important place again in grammatical theory. Halle (1973) and Shopen (1971, 1972a, 1972b, and forthcoming) among others have argued for this position. But if this is correct, then the use of transformations as a means of characterizing the notion 'related sentence-types' will have to be re-evaluated.

4. *Conclusions*

We have said a good deal in this paper about ellipsis in Polish and English but much remains to be seen about the place of ellipsis in the theory of contrastive linguistics. In the more restricted and fundamental sense of contrastive linguistics as an area of strictly grammatical study, more research must be done in the various languages of the world. We need to know to what extent, there are significant typological distinctions in the matter of ellipsis and to what extent elliptical characteristics are related to other kinds of grammatical phenomena. The work of Mathesius reported by Vachek (1970 : 88–93) and that of Perlmutter (1971 : Chapter 4) are contributions in this direction. Surely there is a typological difference of some consequence between Polish and English when we see that Polish allows subject ellipsis more freely and that at the same time it has a larger stock of impersonal expressions. It is worth bearing in mind that Old English and Middle English were more like Polish in both these respects.

In the larger sense of contrastive analysis, we include the notion of style and the relation between language and thought. There we hope to make a contribution to language teaching. On the one hand, we wish to emphasize, as others have done, that ellipsis is a part of language and that one cannot be said to have command of a language without knowing how to say the short, elliptical things; moreover, it is important to see the evidence that ellipsis is a distinct means of encoding thought into language, not just a superficial stylistic device. It follows that elliptical expressions should be taught, and with an understanding of their syntactic properties (cf. Mihailović 1971). On the other hand, there are some extremely difficult questions about the relation between thought and language which stand in the way of seeing how grammatical distinctions like ellipsis play a role in language performance. A second language learner is learning new ways of encoding thought into grammatical form. If we find typological differences in grammatical structure between two languages, we still cannot predict in any mechanical way how the language learner will perceive the structures of the new language, or what difficulties he will have in mastering them.

Principles of style and appropriateness are indispensible ingredients. At the same time the more we understand about the grammar of the first and the second language, the better off we are, because however it fits into the larger picture, grammatical structure is important in defining the framework within which the members of a culture can express their ideas. Ellipsis is part of that framework.

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CLITICS IN ENGLISH AND POLISH

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Abstract

The paper presents a review of English and Polish clitics. Clitics are defined as grammatical or functional formatives which do not, as a rule, receive stress but form a single stress unit with lexical formatives (N, V, Adj). Proclitics are those clitics which attach to formatives following them; enclitics are those which attach to formatives preceding them. Two groups of clitics are discussed in turn: I. those which appear both in English and Polish, i.e., prepositions, personal non-subject pronouns, reflexives, conjunctions, possessive adjectives; II. those which appear only in English (e.g. articles) or only in Polish (e.g. verb particles). In the analysis of the first group it has been attempted to find out whether the behaviour of the English and Polish clitics is comparable, within the particular classes, only by virtue of their being clitics and having the same grammatical function. In the analysis of the second group comparability by analogy or regular non-clitic equivalence has been sought. The points made in the paper are summarized in phonological formulas presenting the proclitic and enclitic conventions for English and Polish.

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The present paper is a sequel to an earlier study on the problems of stress in English and Polish (Ozga 1973). The arguments presented there follow those of Chomsky and Halle (1968)[1] and can, very briefly, be summarized in this way: the stress rules of Polish and English are cyclical rules of the phonological component of the TG grammar; the stress contour of utterances is determined by their phonological surface structure, which is derived from the syntactic surface structure through modifications in the readjustment component of the grammar.

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[1] *The sound pattern of English*, henceforth referred to as *SPE*.

Since the publication of *SPE* (1968) a number of works have appeared, which either enlarge on Chomsky and Halle's proposals or present alternative solutions to various phonological problems. Some of those studies refer to the question of stress assignment and related issues and they will have to be taken into consideration in the ensuing discussion.

A contrastive analysis of stress in English and Polish (as outlined in the introductory paper mentioned) should begin with a formulation of Main Stress Rule (MSR), which assigns "word" or "lexical" stress to lexical formatives. Since, however, several formulations of MSR, apart from the *SPE* one, have been given for English—the most recent one by Halle (1973) and a fairly exhaustive account of Polish lexical stress is contained in Comrie (1972), this paper will not deal with the lexical stress of the two languages. Let it suffice to state here that both the *SPE* rules and the alternatives are much more complex than the basic MSR for Polish, which is formulated by Comrie in the following way:

(1) $V \rightarrow [+\text{stress}] / — C_0(VC_0)\#$

Rule (1) accounts for stress in monosyllabic words and most polysyllabic words (in which stress falls on the penultimate vowel "irrespective of syllable structure and formative boundaries") (Comrie 1972). Exceptions to this rule, for which Comrie also accounts, are not numerous: mostly words of foreign origin with antepenultimate stress (*múzyka*, *uniwérsytet*), which, however, conform to Rule (1) in certain case forms (*uniwersytetámi*). All in all, the word stress of Polish is easier to master by English-speaking learners than vice versa (though having to "count from the end" occasionally leads to mispronunciations). Krzeszowski (1970 : 68) says in this context:

> "The Polish learner will encounter numerous difficulties learning the correct stress of polysyllabic words in English. It is impossible to work out rules in this area since the Polish language does not provide any analogies and the mistakes are not due to any sort of interference. Particular learners will place the stress on various syllables in a purely accidental manner".

It seems, however, that it might be possible to at least partly grade the vocabulary introduced to learners with respect to stress, i.e. starting from the most general (simplest) "variant" of the MSR and gradually introducing the more complex ones[2].

The next problem which a contrastive analysis of English and Polish stress should account for is that of how the two languages assign stress contour to their phonological phrases, i.e. primarily of locating the centre of the contour. The formulation and ordering of the nuclear stress rule (NSR) given in *SPE* has been questioned by a number of authors[3]. It appears that surface syntactic information given in terms of brackets and category labels is not sufficient for correct prediction of the place of the nucleus[4]. But even if it were sufficient, another problem would have to be solved prior to the operation of the NSR, i.e. that of assigning (by the rules of the readjustment component RC) phonological phrase boundaries, to mark the maximal domain of the NSR application. In turn, phrasing depends on the analysis of utterances into (phonological) words. Phonological phrases boundaries correlate with word boundaries associated with certain types of constituents, but not necessarily with syntactic surface structure constituents: the phonological word, relevant for the operation of the rules of the phonological component, need not be a constituent of the syntactic surface structure, (cf. Chomsky 1968 : 368). This brings into focus the problem of *clitics*, i.e. those formatives which do not, as a rule, receive stress but form a single stress unit with a (lexical) formative which either precedes them (enclitics) or follows them (proclitics). Thus phonological words consist of (P) LC (E) (P-proclitic, LC-lexical category -N, V, ADJ, E-enclitic, (although a phonological word can also consist of P+E (cf. below, e.g. pp. 132, 133).

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[2] As was done e.g. in Guierre's *Drills in English stress patterns* though it is rather sophisticated book for advanced students.

Stockwell (1972: 88–9) makes the following claim about clitics:

> "...Prepositions and Personal Pronouns (and, I should have added, several other "grammatical" or "functional classes, like articles, some Auxiliaries, Modals, Conjunctions, certain classes of Particles and Adverbs — in general, all classes which can enter into satellite "clitic" relationships with Nouns, Verbs and Adjectives [though the matter is not simple: cf. Kingdon (1958 : 170–207)]) are obligatorily destressed (or never receive stress) and do not "count", as it were, in computation of the center of the NEUTRAL contour."

From the above formulation it can be inferred that clitics *do* play a role, albeit a *negative* one in the determination of the correct stress contour of a phonological phrase (and, in fact, influence the demarcation of utterances into phonological phrases). Therefore, the aim of this paper will be to find out which classes of formatives in English and Polish have this "parasitic" character and whether their nature and behaviour in the two languages are comparable.

The first point to be established with reference to clitics is the place and form of the rules or conventions which attach them to their non-clitic neighbours. In Chomsky (1968 : 367) a convention is mentioned, which readjusts surface structure so that words delimited by one of the following termini $[_s \#X[\#,\ \#]X\#]_{s1}\ \#]X[\#$ (with X=ø)] which are not constituents, will be constituents. Chomsky and Halle (1968: 367) say:

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[3] An excellent discussion on the recent work on the NSR question is given in Stockwell (1972); therefore the various proposals will not be presented here.

[4] *Neutral* contour is meant here (emphasis and contrast are excluded).

> "Suppose that we have a string ...WX[αYZ]α..., where [α and]α are paired brackets, X[αY is a word, and *W* contains no units. Then this will be readjusted by convention, to ...[αWXYZ]α... Similarly, a string ...[αXY]αZW... where Y]αZ is a word and *W* contains no units, will be readjusted to ...[αXYZW]α... Where this convention is relevant several times, we apply it in such a way as to preserve proper parenthesization."

The example given in *SPE* for the operation of the readjusting convention is the sentence *The book was in an unlikely place*, which is analysed into three words: *the book* (NP), *was in an unlikely* (A), *place* (N), and *was*, *in*, *an* are treated as proclitics to *unlikely*[5].

The convention appears to be language-specific and belong to the RC of the grammars of particular languages. For example, in English personal subject pronouns cliticize to the following verb (*I*⁀$\overset{3}{\textit{sang}}$), unless marked for emphasis or contrast ($\overset{1}{\textit{I}}$/$\overset{3}{\textit{sang}}$). In Polish personal subject pronouns are not clitics. In fact, it might (with reservations) be said that where *I* is a clitic, its Polish equivalent is ø: *I*⁀$\overset{1}{\textit{sang}}$ — $\overset{1}{\textit{Śpiewalem}}$*(am)*, and where *I* is to be stressed (for emphasis or contrast), its Polish equivalent is *ja*: $\overset{1}{\textit{I}}$/$\overset{3}{\textit{sang}}$ — $\overset{1}{\textit{Ja}}$/*śpie*$\overset{3}{\textit{walem}}$*(am)* or($\overset{3}{\textit{Śpiewalem}}$*(am)*/$\overset{1}{\textit{ja}}$)[6]. Foreigners speaking Polish (presumably also native speakers of English) make mistakes by introducing personal pronouns where they would use them clitically in their own language, as Pisarkowa (1967: 32) notes, e.g. *Ona oczywiście gra też na fortepianie, ale ona nie zajmuje się tak zawodowo muzyką.*[7]

In the description of clitics it is necessary to state whether they attach to preceding words (formatives, "words" in the morphological sense) i.e., are enclitics, as *us* in $\overset{2}{\textit{John}}$⁀$\overset{1}{\textit{saw}}$ *us* and *nas* in $\overset{2}{\textit{Jan}}$ $\overset{1}{\textit{widzial}}$⁀*nas* or ($\overset{2}{\textit{Jan}}$⁀*nas* $\overset{1}{\textit{widzial}}$), or whether they attach to words following them, i.e., are proclitics, as *for* in *for*⁀$\overset{1}{\textit{John}}$ and *dla* in *dla*⁀$\overset{1}{\textit{Jana}}$. It is, however, sometimes difficult to decide whether an atomic form is an E(nclitic) or P(roclitic), e.g. *Drinka*

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[5] Although it is not mentioned in *SPE*, in fact, *the book*, there treated as NP may be treated as N (*book*) with proclitic *the*.

[6] The problems of interdependence of stress and word order will not be considered in the present paper.

[7] Cf. also mistakes of Polish learners (at the beginners' level), who omit the proclitic pronouns.

pinta milka day vs. *Drink a‿pint‿of milk a‿day*, (… ten tylko się dowie), *kto cię‿stracil* vs. *kto‿cię stracil*.

Broadly speaking, English and Polish share some classes of clitics: prepositions, personal non-subject pronouns, reflexives, conjunctions, possessive adjectives, but only English has clitic articles, personal subject pronouns and auxiliaries, while only Polish has clitic particles (but cf. Stockwell 1972: 89) and movable verb endings[8]. Let us consider the two groups in turn. In Group I (where the shared clitics belong) it will be attempted to find out whether the behaviour of the English and Polish clitics is comparable, within the particular classes, only by virtue of their being clitic and having the same grammatical function, i.e., carrying the same label in the syntactic surface structure. In Group II, where the only point in common is the clitic character of the formatives, comparability by analogy will be sought, or alternatively, regular non-clitic equivalents in the other language. In a sense the discussion to follow is meant to enlarge the presentation of Krzeszowski (1970: 69–70), which is practically the only passage concerned with the clitics of English that makes reference to the native (Polish) usage and possible sources of interference in that area of phonology, (though there are some "comparative" remarks in Mikulski 1961).

English clitics appear in various books on English pronunciation under the heading of weak (atonic) forms as opposed to strong (stressed) forms a group of function words. They are usually presented in the form of lists, followed by complicated rules of usage and non-usage. The distinction that is not always made clear on such occasions is the difference between unstressed (clitic) forms and their reduced obligatory or optional variants ("weak forms proper"). Although presumably all function words (*also* in Polish) are pronounced differently when stressed and differently when they are clitics, not all undergo such reduction as to require special Reduction Rules, e.g.,

I $\overset{1}{\textit{know}}$‿*him* [ɪm] [m]   vs. *I* $\overset{3}{\textit{know}}$ $\overset{1}{\textit{him}}$ [hɪm]

$\overset{1}{\textit{Znam}}$‿*go*   vs. $\overset{1}{\textit{Jego}}$ $\overset{3}{\textit{znam}}$ (*$\overset{3}{\textit{Znam}}$* $\overset{1}{\textit{jego}}$)

The question of reduction as a process subsequent to cliticization will not be discussed here.

Let us begin the analysis of Group I with *prepositions*. In both languages they are proclitics:

I go to‿$\overset{1}{\textit{school}}$ and   *Chodzę do*‿$\overset{1}{\textit{szkoły}}$

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[8] Other classes are mentioned in Kingdon (1958) and Szober (1957).

Their clitic character is not so obvious when they are polysyllabic (this is true of all clitics) and they then appear to bear some degree of stress:

$\overset{3}{\textit{against}}$ *the* $\overset{1}{\textit{criminals}}$ and $\overset{3}{\textit{przeciw}}$ $\overset{1}{\textit{zbrodniarzom}}$

In view of the above it may be necessary to state, possibly in terms of restrictions on the readjusting convention, that cliticization applies to *monosyllabic* functional formatives, while all the others are phonological words in their own right, which undergo considerable lowering of their original stress in the transformational cycle operating on the phonological phrase to which they belong.

There is an apparent similarity of behaviour when prepositions are followed by personal non-subject pronouns which are enclitics. The combinaton P+E becomes a phonological word with the stress on the preposition: *'for⁀us* and *'dla⁀nas*.

The formula applies, however, only when both the preposition and the personal non-subject pronoun are monosyllables. While in English the formula P+E operates also in case of polysyllabic prepositions (personal non-subject pronouns are only monosyllabic), e.g. *around us*, *between us*, in Polish the combination $P\overset{\frown}{+}E$ is subject to several rules:

1. if the preposition is M (monosyllabic), the combination P+E is stressed according to the basic MSR of Polish (which gives the 'P+E comparable to English in case of M+M), e.g. *'do⁀nas* but *do⁀'niego*.

2. if the preposition >M, the combination P+E does not form a single accentual unit, but both parts are stressed according to the basic MSR of Polish, e.g. *'przeciw/'mnie*, *'między/'nami*, *doo'koła/'nas* (exceptions are 1. combinations with *koło*+M, which *do* form one accentual unit: *ko'lo⁀'nas*, but *'koło/ciebie*, and 2. combinations of closed monosyllabic prepositions with the oblique forms of *ja*, where special phonological adjustments have to be made):

przed+*mną*→*prze'de⁀mną* not **przed⁀mną* (other examples: *na'de⁀mną*, *be'ze⁀mnie*, but *'za⁀mną*, *'do⁀mnie*).

Thus the P+E combination presents more difficulty to the English-speaking learner of Polish than vice versa, though the fluctuation of stress in various subdivisions of it may influence the Polish learners of English so as to depart from the simple pattern $'P\overset{\frown}{+}E$ (cf. Krzeszowski 1970:70). Another difficulty for the learner of Polish is in correct stressing of the combination Preposition (M) +personal non-subject pronoun (M) when the latter is stressed for emphasis or contrast. In English in such a case the formula P+LC holds true, i.e., *for⁀'me* behaves like *for⁀'John*. Comrie (1972) applies the same formula to Polish: "... *'do⁀mnie* "to me", but *do⁀'mnie* with emphatic stress, the pronoun in this case being treated like a full noun.". The form *do⁀'mnie* seems to me, however, unacceptable. The Polish equivalent of English $\overset{3}{\textit{Speak}}$ *to* $\overset{1}{\textit{me}}$ ($\overset{2}{\textit{not}}$ *to* $\overset{1}{\textit{her}}$) is not *$\overset{3}{\textit{Mów}}$ *do* $\overset{1}{\textit{mnie}}$ ($\overset{2}{\textit{nie}}$ *do* $\overset{1}{\textit{niej}}$), but $\overset{3}{\textit{Mów}}$ $\overset{1}{\textit{do}}$*⁀mnie* ($\overset{2}{\textit{nie}}$ $\overset{1}{\textit{do}}$*⁀niej*) with emphatic high fall on the combination *Prep+Pron* (cf. unemphatic $\overset{1}{\textit{Mów}}$ $\overset{3}{\textit{do}}$*⁀mnie* and possible shift in word order). Yet another problem that the English-speaking learner of Polish will have to face is that of the stress pattern in certain lexicalized combinations of *Prep+Noun* (*M*), in which stress falls on the preposition, e.g. *Odejdź 'na⁀bok* (cf. *Odwrócił się na 'bok*). Examples of this usage are all set phrases, in which *Prep+Noun* (*M*) is an adverbial of manner or direction: *'na⁀głos, 'na⁀czczo, 'do⁀snu, 'na⁀dół, 'do⁀dna, 'za⁀pas* (in the idiom *wziąć nogi za pas*), but cf. *na⁀'sen, bez⁀'dna, dla⁀'psa, na⁀'wiatr*. The old penultimate rule is not productive any more, and the pattern Prep+Noun (M) is used, especially with nouns of foreign origin: *na⁀'mecz, na⁀'rajd, na⁀'spleen* (Topolińska 1961:82). Where the combination is felt to be fully lexicalized, the old rule still holds fast and stress does not shift to the noun even if emphasis or contrast are involved (cf. Prep+Pron (M) above): *Jestem 'ze⁀wsi* (*nie z miasta*) — not **Jestem ze⁀'wsi*. These phrases will be best taught as idioms to the foreign learner, comparable in structure (but not orthography and stress) to English *'aside, be'forehand*, etc.

An English problem, not shared by Polish, is that of postposed prepositions, as in *Where is he 'from? He's impossible to work 'with*. Postposed, final prepositions cannot, by definition, be proclitic in this usage and they do take part in the computation of the nucleus: the degree of stress they ultimately receive depends on the constituent structure of the given phonological phrases (cf. *Where from? Where is he from? Where is John from?*). Postposed *non-final* prepositions as in *It's the same one* (*that*) *you were looking at yesterday* (King 1970:135) cannot be treated as clitics either (... *[lukɪŋ ət jestədɪ]). There is, however, nothing in the syntactic surface structure to suggest that *at* should be separated from *yesterday*. King (1970) proposes that the syntactic surface structure should also contain "O anaphora" to mark the place where the complement of the preposition (now deleted or front-shifted) has been. He (King 1970:136) says:

> "Some abstract, unsubstantial syntactic elements have to be carried along in some form or other to the very end of the generative process in order to make the phonological rules operate in a way that will yield correct final results".

A "deletion site"[9] following *at* in King's example will prevent it from cliticizing to *yesterday*. An alternative solution would be to specify the categories of constituents to which prepositions can cliticize and exclude adverbs like

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[9] The empty place is called "deletion site" in Baker (1971). The effect of a syntactic deletion on the application of phonological rules is mentioned in Lakoff (1970).

yesterday from the class (unless they function as nouns, e.g. in a metaphor like *looking at⁀yesterday*).

In the foregoing discussion on prepositions, personal nonsubject pronouns were mentioned as enclitics to the former[10]. Apart from serving as objects of prepositions, they also function as direct and indirect objects of verbs to which they attach as clitics unless stressed (and/or shifted in Polish) for emphasis or contrast (then "strong" forms are used where the pronouns have them, e.g. *I'm not asking YOU* [ju:] and *Nie pytam CIEBIE* or *'Ciebie nie pytam*). In English direct and indirect object pronouns have the same forms and are used post-verbally only: *He saw you* (DIR) *He gave him* (IND) *an apple* (but cf. *He gave an apple to him*: *He gave the boy an apple*:? *He gave the boy it*: *He gave it to the boy*) there are restrictions on the ordering and form of objects when one of them is a pronoun: although there are two possibilities when the indirect object is pronominalized, the (?) example shows that there is only one grammatical version if the direct object is pronominalized). When both objects is a single sentence are pronominal, the order is Verb — DIR Obj — PREP Obj, as in *He gave⁀it to him*, i.e., the indirect object is, in fact, a prepositional object and as such can only follow the direct object *(*He gave to him it*). The problem of the order of clitic pronouns is discussed by Perlmutter (1971 : 48) who says:

> "In languages in which the clitics do not move to the same place in the sentence, the question of their order relative to each other does not arise. This is the case in English, for example, where pronouns can be clitics which form a single phonological word with the word they attach to, but since the clitics are not all in the same place there is no problem of specifying their relative order."

However, at least in British English object pronouns can move to the same place in the sentence, i.e., the post-V position and their order is IND — DIR (equivalent roughly to DAT — ACC in Polish and other "case" languages), e.g. *Give⁀me⁀it*.

In Polish the monosyllabic object pronouns (in oblique cases: Genitive, Dative, Accusative and Instrumental, but not Locative as requiring a preposition) appear post-verbally: *Nienawidził⁀jej*. *Dał⁀mi jablko*; *Widział⁀cię*; *Komenderuje⁀mną*;, but they can also appear pre-verbally, provided a stressed element precedes them to which they can cliticize: *Przecież⁀cię znają*. *Próbują⁀nim rządzić*. According to Dłuska (1947), it is difficult to decide in such cases whether the pronouns are enclitics or proclitics. They appear to be proclitic to verbs to which they "belong sense-wise" (należą wg sensu), but can equally well be enclitic to the stressed constituent that precedes them. The latter interpretation, says Dłuska, is due to the "syntactic principle" which demands that object pronouns be enclitics. It seems, however, that the requirement is not of syntactic nature, but at most a syntactico-phonological one, if not entirely phonological; in *'On⁀im/pokaże* the pronoun is *both* semantically and syntactically "closer" to the verb and it is the phonological criterion that joins the more distant syntactically *On⁀im* into a phonological word. Such phonological considerations, unmotivated syntactically, are the very reason for introducing readjusting clitic conventions which allow proper phrasing. It may be worth while quoting Stockwell (1972: 98) at this point:

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[10] Stockwell (1972:98) says that "pronouns always look for a prop to support them. They are stressable only when the prop has been removed, or when they are contiguous with even less able-bodied categories (like prepositions or conjunctions) as in the phrase *between 'you and 'me*." The examples with *'Prep⁀+Pron* suggest, however, that it is the pronoun that is less able-bodied than the preposition. *You* and *me* appear to be more prominent in Stockwell's examples because a contrast is implied (cf. Polish *'między'mną a* (*i*) *'tobą*, or *be'tween⁀us*).

> "Optional phrasing... ... operates on the general principle that pauses must be introduced between higher ranking constituents before they are introduced between lower ranking ones. The principle has the important qualification that you ignore the ranking of any constituent that has been attached as a clitic, intonationally, to some other constituent".

Thus, e.g., when an English subject pronoun is attached to the following verb, there is no pause, even though they are the two highest ranking constituents. The "syntactic principle" mentioned by Dłuska (1947) does refer to syntax in so far that it is necessary to block the shifting of the clitic object pronouns before the verb (or before pre-verbal modifiers) if the shift were to result in putting the pronouns in the absolute initial position: **Go strasznie oszukali*, **Mi nie dali* (but cf. *'Jego strasznie oszukali. 'Mnie nic nie dali* and *'Ale⁀go strasznie oszukali. 'Wcale⁀mi nie dali*)[11]. On the other hand, the shift is obligatory (or recommended[12]), if the enclitic is sentence-final and there are in the sentence pre-verbal elements to which the pronoun can attach: (?) *On sam to powiedział⁀mi* vs. *On sam⁀mi to powiedział*. It is also the function of syntax to specify the correct relative order of clitic pronouns where they appear in clusters, either next to the verb: V+E or next to the first stressable constituent X+E. The order (possibly to be stated in the form of surface structure constraints, cf. Perlmutter 1971) is as follows: $\text{DAT} - \begin{Bmatrix}\text{GEN}\\ \text{ACC}\end{Bmatrix} - \text{INS}$, e.g. *Żebyś mi ją nim nie straszył*! *Daj mu ją, Niech mi jej nie odbiera, Nie zaimponujesz mi nią, Prześladuje nas nią*[13].

The formula for Polish non-subject pronouns will be extended to include other enclitics whose order must be specified. One of those is the reflexive pronoun ***się***, which most commonly occurs after DAT, but before GEN, INS (***Ja mu się nie dziwię, Chyba się go nie boisz, Brzydzę się nią***). In English, what is called "reflexive pronoun" will be comparable to Polish ***się*** in a few cases where the pronoun is a "true" reflexive, replaceable by ***siebie***: ***I'm 'washing⁀myself*** vs. ***'Myję⁀się*** (***siebie***). The role of ***się*** as a clitic in obligatory can be made in the case of conjunctions. In both languages conjunctions are proclitics and have to be stressed if no "prop" word follows them: ***And⁀ ⁀don't do it again — I⁀nie rób tego więcej*** vs. ***I'd like to help you, 'but...*** — — ***Chcialbym panu pomóc, 'lecz...*** The clitic character of conjunctions is not evident when they are polysyllabic: ***Before I pass on to the next question*** — — ***'Zanim przejdę do następnego pytania***, and in stressing them English and Polish follow their respective lexical-stress rules.

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[11] The first element cannot be a proclitic conjunction or particle: **No mi się to nie opłaciło*, **A mu nie dali*.

[12] As Szober (1957 : 321) says, "enklitycznych zaimków unikamy na końcu zdania, bo na to miejsce wysuwamy zwykle wyrazy, na które kładziemy największy nacisk".

[13] The *mi* in the first example is an "emphatic" dative.

The last class of clitics in Group I is that of possessive attributive pronouns (possessive adjectives) which cliticize to the following formative in English (***my⁀house, my⁀new book***) and which can be either proclitics (***mój⁀dom, nasz⁀stary pies***) or enclitics (***'dom⁀ich stal na wzgórzu***) in Polish. Only the monosyllabic forms of those pronouns are felt to be clitics, which means all forms in English and a few in Polish. The English forms cannot be used predicatively (****this house is my***, etc.) and a group of matched non-clitic possessive predicative pronouns (possessive pronouns "proper") has to be used (***this house is mine***, etc.). In Polish there is only one common paradigm for both usages, e.g. ***Mój⁀pies*** and ***Ten pies jest mój*** where the second ***mój*** is always stressed. The ambivalent character of the Polish attributive pronouns (E or P?) can be explained only by reference to syntax and not phonology. A possessive pronoun is attracted to the noun which it modifies and cliticizes in its direction: ***nasz⁀maly domek*** and ***'domek⁀nasz / maly***. Since thiis is connected with the problem of word-order (pre- and postposed attributives) the learner of Polish will encounter more difficulties, connected with the relationship between stress and the information structure of sentences, emphasis and contrast.

The problems with clitics are even more acute in the case of clitics of Group II, where no direct categorial equivalence exists between the clitics of one language and their semantic equivalents in the other. It may be worth while, however, to look for some kind of analogy which may reveal deeper regularities to be utilized in teaching.

Let us deal with the English Group II clitics first. Articles are proclitics which have no straightforward formal equivalents in Polish. The fact that they cliticize to the following formatives is, however, easily grasped by the learners (although the subsequent obligatory vowel reduction is not always made). Examples: ***a⁀rose, a⁀red rose, the⁀eager student.***

English personal subject pronouns, when unmarked for stress, cliticize to the following constituent (see quotation from Stockwell (1972 : 98) above).

In Polish the personal subject pronouns are usually stressed (except such enclitic cases as *Wiedzialem⁀ja o tym* (Topolińska 1961)) and Polish learners often give undue stress to the English subject pronouns. The English pronouns of this class do not conform to the above proclitic principle when they occur next to auxiliaries. The combinations *Pron+Aux* and *Aux+Pron* together cliticize to the following formative (though possibly Aux cliticizes to the Pron first in *Pron+Aux*, as contracted forms suggest: *He'll, They're*), e.g. *They've⁀gone, Can⁀you⁀close the door*?. If, however, the combinations are found finally (or before a "deletion site"), *Pron+Aux→Pron+'Aux*, while *Aux+Pron→'Aux+Pron*. That is, if the Aux is final, it is stressed and the pronoun attaches to it: *I know he⁀can, Where do you think⁀it is*? and when the Pron is final, it is also the Aux that is stressed and the Pron cliticizes to it as "less able-bodied": *Why 'must⁀he*? *'Would⁀you*?, etc.

As to the Aux itself, there is a number of problems connected with its stress and reduction possibilities. It is difficult to decide whether it is an enclitic or a proclitic. Contracted forms as in *The teacher's coming* suggest that 's is an enclitic, but in forms where the contraction does not occur, e.g. *The teacher was coming*, the combination *was⁀coming* is more likely than *the teacher⁀was* if the sentence were to have an internal (optional) pause. An extensive analysis of stress and reduction of auxiliaries can be found in King (1970), Zwicky (1971), and Baker (1971).

The Polish clitics of Group II are particles. A general name of "particle" is given to a set of monosyllabic grammatical formatives which cannot occur independently. Some of them are clitics, e.g. intensifiers *no, że, li, bądź* of enclitic character (*Chodź⁀no tu, 'Jakże smutno, 'Znasz⁀li ten kraj, 'Jaki bądź zeszyt*), proclitic *nie* in the meaning of *not*, and so-called movable verb endings: *-śmy, -ście, bym, byście*, etc. The behaviour of the last two classes may present difficulties in teaching, therefore the two classes will be discussed below.

The negative particle *nie* is comparable to *not* in all usages but Verb Negation, e.g. *nie⁀'ja* (*not⁀I*), *nie⁀'calkiem* (*not⁀quite*)[14]. In Verb Negation (in English it is AUX-negation) English and Polish follow their respective lexical-stress rules. Thus, in Polish *nie+verb* receives the stress on the penult *'nie⁀wiem, nie⁀'bylo, nie⁀za'czynaj* (cf. **nie⁀'mam, *nie⁀'wiem*). English *not* cliticizes to the AUX, with obligatory contraction. Zwicky (1971 : 328) comments on the behaviour of *not* in the following way:

> "The lack of an intermediate form [*nət*] can be explained by having some occurrences of *not* enter the phonological component as affixes to verbs, like the "neutral" suffixes *—ness*, *—able* and the inflectional endings of nouns and verbs. These instances of *not* will then remain stressless because of their affixal character, and we require an obligatory vowel-deletion rule."

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[14] Here a variant stressed *nie* is also possible: *'nie/'ja* (*'not' I*), but cf.*'nie⁀ja and *not⁀I.

In Polish *nie* can be treated as a prefix to the verb, comparable to the prefixal *nie* (meaning *un-*) in adjectives and nouns, as in *'niecny, nie'wierny, nieprzyt'omny, 'nieład, nieł'aska, niewyg'oda*.

The verbal endings are enclitics which either attach to the verb or to the first stressed element in the sentence. When they cliticize to the verb, they are not separated from it in spelling, which causes erroneous shift of stress that is becoming more and more common: **chodziliśmy* for *chodziliśmy, *zrozu'miałbyś* for *zro'zumiałbyś*, etc. This tendency is coupled with another tendency frowned upon by purists: locating the particles only postverbally, which impoverishes the stylistic resources of the language and leads to errors of the type: **Prosiłbym, że przyszedłbyś*; **Gdyby nie korzystaliśmy*; **Gdy to zrobiłby kto inny* (cf. correct *Prosiłbym, żebyś przyszedł*; *Gdybyśmy nie korzystali*; *Gdyby to zrobił kto inny*). The enclitic verb particles move readily before the verb, to the so-called "second position" after the first stressed constituent: *Chętnie byśmy skorzystali*; *Wyście tego nie dostali*; *Policja by tego nie znalazła* (but *Bohaterski Odyseusz by oddał życie za swych towarzyszy*, Saloni 1971:81). The only requirement on their ordering is that they should not occur initially, i.e., have nothing to cliticize to (**Gdyby Prus wiedział, że jego umiłowane miasto będzie pamiętać, by się cieszył*), although there are also constraints on their ordering within a clitic cluster. A general rule for the order of Polish enclitics is given in Misz (1966) (it is an expanded version of the rule at page 135 above) and it can be presented in the form of the following chart:

ACC
X — INTENS — V-PART — DAT — GEN — INS, where X the stressed
REFL

first element (or verb), INTENS is the intensifying particle and V-PART is the verb particle (or movable verb ending), e.g. *Zrobił⁀no⁀byś⁀mi⁀się grzeczniejszy*; *Cóżem ci się nagadał*. As the correct ordering causes a great deal of trouble even to the native speakers, it is to be expected that the foreign learner will find this aspect of Polish usage particularly difficult. Again, these matters are related to the whole mechanism of Polish word order, of which the clitic phonology and syntax are only a part.

The foregoing brief discussion of Polish particles concludes the present review of English and Polish clitics which was, of necessity superficial and merely outlined the areas to be studied in a major work which clitics undoubtedly deserve. For the time being, even such crude and imprecisely formulated rules (or conventions) as those given below may, if accompanied by appropriate examples and practice material, help learners in correct phrasing and consequently in achieving correct pausing, stressing and rhythm in their own utterances and in the vocal interpretation of texts (reading, acting). The formulas below include all the points made in the present paper.

ENGLISH

PROCLITIC CONVENTION

$WX\ [_s YZ]_s \rightarrow [_s WXYZ]_s$
when $W = \emptyset$, $X\ [_s Y =$ Phonol. Word, $Y \neq \emptyset$
$X =$ 1. Prep (M), $Y \neq$ Obj. Pron
2. Conj (M)
3. Poss. Adj
4. Subj. Pron
5. Aux, $Y \neq$ Subj. Pron
$Z = \ \# \#$

ENCLITIC CONVENTION

$[_s XY]_s ZW \rightarrow [_s XYZW]_s$
when $W = \emptyset$, $Y]_s Z =$ Phonol. Word, $X \neq \emptyset$
$Z =$ 1. Obj. Pron
2. REFL
3. Neg "not", $X =$ Aux

POLISH

PROCLITIC CONVENTION

$WX\ [_s YZ]_s \rightarrow [_s WXYZ]_s$
when $W = \emptyset$, $X\ [_s Y =$ Phonol. Word, $Y = 0$
$X =$ 1. Prep (M), $Y \neq$ Obj. Pron.
$X + Y \neq$ Lexicalized
2. Conj (M)
3. NEG "nie", $Y \neq$ Verb

ENCLITIC CONVENTION

$[_s XY]_s ZW \rightarrow [_s XYZW]_s$
when $W = \emptyset$, $Y\ ]_s Z =$ Phonol. Word, $X \neq \emptyset$
$Z =$ 1. Obj. Pron (M)
2. Verb. Part.
3. Refl "się"

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NOMINALS IN CONTRASTIVE STUDIES

English nominal compounds and their Polish equivalents

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0.1.

This paper belongs to the domain of lexico-semantic studies. I shall discuss here certain aspects of the relationship between English and Polish nominals, taking English nominal compounds and their Polish equivalents as the starting point for my discussion. The choice has been dictated by two factors:

a) nominal compounds are present in both languages, the two constructions being often congruent[1],

b) sentential origin of English compounds seems to be well established (cf. Lees 1960, 1970a, 1970b), while any attempt at making other types of nominals our point of departure would lead into a number of controversial issues (e.g. cf. Chomsky 1970 and references there; in case derived nominals are taken into consideration).

Since I am interested in nominals from the viewpoint of primarily lexical studies, nothing will be said here about such extra-lexical formations as relative clauses, gerundives, infinitives, complements and quotative material of various provenance.

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[1] A list of congruent constructions would include:

a) loan translations and borrowings: e.g.: *redskin* "czerwonoskóry", *blockhouse* "blokhauz (through German, but cf. OED "apparently earlier in English"); *motorcycle* "motocykl", *blooddonor* "krwiodawca (probably common origin). *Bluebeard* "Sinobrody", etc.

b) forms of which no common origin could be ascertained: e.g.: *longterm* "długoterminowy", *longhair* "długowłosy", *half-circle* "półkole" *selfportrait* "autoportret", *selflove* "samolubstwo", *unipolar* "jednobiegunowy", *watertight* "wodoszczelny", *waterfall* "wodospad", *gasmeter* "gazomierz", *woodcut* "drzeworyt".

In this paper I would like to suggest that contrastive lexical studies[2] might be considerably facilitated if the following four hypotheses were correct. The hypotheses are:

1. ALL NOMINALS at some level of representation are structurally complex items and may be thought of as reflexes of underlying structures consisting of predicates and arguments;

2. ALL NOMINALS are preformed in the course of the nominalization process BEFORE they are inserted into trees;

3. native speakers' knowledge of nominals includes among others their knowledge of two types of properties which they are able to ascribe to both the ready-made (=generated) nominals and to referential indices (in the underlying structures of complex nominals; cf. hyp. 1 above); these properties are: a) field properties (operating in terms of generality-specificity markings), b) "role" properties;

4. in addition to nominalization transformations there should be posited in the lexicon a set of (probably) universal lexical redundancy rules, i.e., operations which specify: a. role recategorization range, and b. field recategorization range. The two operations are comparable to what has been known as "metaphorization processes" (in the broadest possible sense of the term "*metaphor*").

1.1.

To elaborate and illustrate what is meant by the above hypotheses it will be most convenient to start with hyp. 3. It has been assumed that native speakers are capable of attaching to the indexical argument the derived nominal (and possibly to some of the semantic primitives from which the nominals are derived) specific semanto-functional "roles", so that each nominal has one PRIMARY role and may have (to be specified by the role-recategorization rules) one or more secondary roles having, however, never more than one role for one derivation[3]. Thus, it seems that native speakers would mark nominals like e.g.: *fork*, *pistol*, *shotgun*, *lighter*, or *washing machine* etc., as primarily + Instrumental; *time*, *day*, *afternoon*, *Middle Ages* would be marked as + Temporal; *field*, *assembly plant*, *doctor's office*, *hermitage*, *brewery* + Locative; *boy*, *teacher*, *servant*, *brewster*, *car thief*, *poet*, and *pickpocket* would be primarily + Agentive. It is also possible that + Objective, as well as +Source and +Goal might be included among the primary roles—the first to account for such forms as E. *draftee*, *employee*, or P. *odlamek* "bit, fragment", *jadlo* "foodstuff (lit. "smth. to be eaten")", *najmimorda* "counsel for the defence", or *lakocie* "sweets". The two other roles could be assigned to forms like *Church*, *Heaven*, *school* (+Goal), and *mine, tree,well* (+Source). It seems that both +Source and +Goal may be reinterpreted as +Locative and (as all other roles) as +Neutral—the latter being an unmarked role different from +Objective.

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[2] Contrastive lexical studies may be of two types: a. semantosyntactic studies, b. investigation of field properties. This paper deals exclusively with a-type studies. A very good example of b-type analysis is Hartmann (1973).

[3] Thus, I have implicitly accepted here Weinreich's notion of lexical item, i.e., one form — one meaning unit (cf. also McCawley 1968).

1.1.1.

The proposal put forth is similar to Fillmore's Case Grammar in the sense that roles discussed above are also meant "to identify the underlying syntactic-semantic relationship (...) whether through affixation, suppletion, use of clitic particles, or constraints on word order" (Fillmore 1968 : 21). It differs from Fillmore's grammar in that I do not think that "cases" are assignable ONLY IF a given specific verb requires them in its frame. Roles seem to be both predicate-determiners AND predicate-determined with various degrees of susceptibility to the determinative function. +Neuter (by definition), +Objective and +Agentive (in this order) seem to come closest to the typical predicate-dependent role, which becomes evident as soon as nominals marked primarily with these cases are inserted into larger constructions (phrases, clauses, sentences). And yet in view of the fact that ALL roles may be recategorized and often no (surface) sentence frame is necessary for the native speaker to predict such recategorization, claim 1 below seems as plausible as the rival claim 2:

1: given a predicate with its case frame, the native speaker is capable of assigning to the predicate the proper arguments (role unmarked arguments are listed in a Dictionary),

2: given two (possibly more) role-specified arguments, the native speaker is capable of specifying their predicate.

It is claim 2 that will be defended here for two resons. First, it allows a uniform treatment of both abstract and non-abstract predicates and arguments[4]. Secondly, one may hope to explain within a framework of this type some collocational properties of nominals (i.e., why certain nominals necessarily collocate with certain predicates, e.g. *dogs bark, horses neigh.*, etc., and also why certain +Agentives cooccur with certain +Instruments).

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[4] Abstract arguments may be thought of as referential indices ("conceptual entities which individual speakers create in interpreting their experiences") non-abstract arguments being NP's. Abstract predicates correspond to what has been referred to as "atomic predicates" by the generative semanticists, they are often equivalent to logical predicates ("not", "be a part of", "be included in", "and", "but", etc.). Non-abstract predicates are verbs, prepositions, certain adjectives, and derivational suffixes of certain types.

A possibility was mentioned for speakers to be able to recategorize arguments without frame extension. Here are some examples of such redundancy rules:

a) +Locative//+Source: *mine, well, sea, spring*, etc.

b) +Temporal//+Locative: *war, battle, moon, play*, etc.

c) +Agentive//+Instrumental: *kisser, opener, sender*, etc.

d) The reification process (cf. McCawley 1968:130–132) may also be thought of as a type of case reassignment operation: e.g.

John *weighs 200 pounds* (+Agentive[5] ⟶ +Neuter)

John's dissertation is *lying on the piano* (+Result[5] ⟶ +Neuter)

In some cases the reassignment is related in as yet unclear way to the topicalization operation (in the sense: "promotion of semantic material"). Fillmore's subject formation rules seem to fall within the range of this type of phenomena.

Compare, for instance, the attested English compounds with the hypothetical ones:

Attested: (Lees 1970b)	Hypothetical:
$N_{1(+\text{Objective})}+N_{2(+\text{Instrument})}$	$N_2+N_{1\begin{smallmatrix}(+\text{Goal})\\(+\text{Source})\end{smallmatrix}}$
cough syrup	syrup cough
fly paper	paper fly[6]
chastity belt	belt chastity
coke machine	machine coke
water pistol	pistol water

1.2.

By field properties I mean an indexical (possibly numerical) specification of nominals, so that each noun N_x in the lexicon presupposes that there is at least one noun N_{x+1} more general than N_x and at least one noun N_{x-1} more specific than N_x. Thus, it is assumed that the speaker-listnener "marks", for example, the item *weapon* as more general (within a particular field) than *gun*, which in turn is more general than *firearm* and *pistol* respectively. Such specification is necessary to properly identify the set-theoretical relation of proper inclusion of the two arguments in e.g.: ***pathway, palmtree, troutfish, marriage relationship***, or ***foodstuff*** (cf. 2.2. below). In case the condition put forth above is not fulfilled (i.e., the lexicon lacks a particular N_{x+1} or N_{x-1}) the more general or more specific nominal will be created in the process of morpho-syntactic nominalization (***the black pistol over there***) or a field recategorization takes place (***a thing, an instrument***). With a hypothesis of this form one might try to account for the fact that items like ***object, thing, stuff, instrument, person*** are felt to be "related" to some other nominals, or the fact that diminutives, augmentatives and adjectival, genitival or prepositional phrases often correspond to one another. It is not clear whether referential indices could be marked with respect to their generality-specificity properties. Intuitively, one would have to reject this possibility. As a result, one would have to postulate two distinct types of operations resulting in nominals: those having ready-made nominals as their arguments (cf. 2.2.—linking processes) and those operating in terms of indices (non-linking processes). In consequence the relation of inalienable possession and such relations as "part of", "type of", "sort of" would be relations between two names and not two distinct conceptual entities. This paper leaves this question open since it bears no direct influence on what follows[7].

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[5] It is assumed in this paper that $\text{Proper}_{+\text{human}}$ Nouns will have +Agentive as their primary role.

[6] In some cases I would assign a different role from Lees' Objectives and Instrumentals. Such decision, however, would not influence my conclusions since what I try to show here is that topicalization entails role recategorization and not that it changes any specific role into some other specific role.

1.3.

The four hypotheses entail two assumptions which seem to be acceptable within both Chomsky's 1970 framework and generative semanticists' approach. Namely, it is assumed that: a. the number of nominals is infinite, and b. that any phonologically possible word or sequence of words may be dominated by an NP node (or its equivalent S, NP-nodes, a referential index, etc.) at some point of the derivation (as a result of some nominalization transformation, the "quotation-nominal formation" included).

Evidence supporting the hypotheses has been taken from current discussions in theoretical linguistics (cf. e.g. Chomsky 1970; Bach 1968; McCawley 1968, 1970; and Karttunen 1968, 1970) as well as from studies of lexical intertranslatibility[8] or historical linguistics. From historical linguistics I have accepted Rozwadowski's assumption (Rozwadowski 1904) that semantic changes and semantic processes operating in "living" languages are subject to the same set of rules and, specifically, that every noun (in the IE family of languages) may be reduced to a binary structure if semanto-syntactic, morphological and historical aspects of the item are simultaneously taken into consideration. Furthermore, syntactic word groups, compounds, derived nominals and root formations are but stages in language history and any decision made with respect to one class of nominals (for instance, compounds) will have to crucially bear on treatment of all other classes. If a linguistic theory aims at giving accounts of typical situations and not exceptions (and for most IE languages root forms are rather exception than rule), the theory will have to take note of such facts[9].

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[7] When the paper was presented at the 6th International Polish-English contrastive conference in Kazimierz (April 24–27, 1974) my attention has been drawn to the complexity of the problem by Dr W. Browne (of Zagreb) and T. P. Krzeszowski (of Łódź). I would like to thank them for their comments which resulted in changes made in section 1.2.

[8] Contrastive lexical studies of type a. (cf. note 1) have been carried out for some time as studies of lexical intertranslatibility (cf. Binnick 1970).

2.0.

Difficulties English grammarians have had with finding an unequivocal criterion for the English compound are well known, so instead of repeating various arguments of e.g. Bloomfield (1933 : 227 ff.) Jespersen (1965:134–142) and Lees (1960: 113–127, 180–185) I shall limit my English examples to such items which have been accepted as bona fide compounds in one of the three above mentioned monographs.

In Polish true compounds are relatively easy to distinguish from syntactic groups but the space between the syntactic group and the compound encompasses a pair of complex units different from both compounds and groups. These are the so-called juxtapositions and concretions[10]. This four way split of complex nominals points to the fact that in addition to phonological and semantic criteria Polish grammarians could make much more extensive use of inflectional and word positional evidence than their English colleagues. Formally, the four units may be differentiated as follows:

A. *Compounds* consist of two units of which at least one has a morphological form different from the form it would have in isolation (in the dictionary) or in a free syntactic group. Typically, the first member of a nominal compound represents a nominal or adjectival stem extended with the vowel *-o*, or a verbal stem extended with *-i*, e.g.: *groszoròb* "money-grubber", *rudobrody* "red-bearded", *golibroda* "barber". Their second member in most cases is a noun of a form identical to the one it shows in isolation, though it may also represent a deverbal or denominal stem (as in *stogłów* : : *głowa*" a hundred-headed (monster)", *dlugouch* : : *ucho*$_{\text{nom. sg.}}$ "long-eared one"

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[9] My paper owes to Rozwadowski (1904) much more than the evidence given in the section. Basically, I follow most of the insights presented in his monograph.

[10] The terms have been given as equivalents of Polish: *zestawienia* and *zrosty* respectively in Gołąb, Z. et al. (1968).

ludojad : : *jadać*$_{\mathrm{Vinf}}$ "man-easter"). The first member of the true compound is indeclinable.

B. *Concretions* like compounds are united by a penultimate stress (strong) and specified (cf. Jespersen 1965) meanings, but unlike the former show government and agreement typical of syntactic groups. Permutation of their members (meaning preserved) is possible, in which case there is no morphological modification of their structure though the new formation is stressed like a syntactic group. Declination of both members is highly irregular and there seems to be a marked tendency to make the first member indeclinable. Examples: *sztukamięs(a)* "boiled beef" (indeclin.), *wniebowzięcie* "Assumption", *Wielkanoc* "Easter", *widzimisię* "whim" (indecl.), *psiakrew* "scoundrel" (both members may be declined).

C. *Juxtapositions* are united by highly specialized meaning and reference. Normally no permutation of their members is possible. Both members are declinable and both are fully stressed. E.g.: *Boże Narodzenie* "Christmas" *Bolesław Chrobry* "B. the Brave", *maszyna do szycia* "sewing machine".

D. *Free syntactic groups* are word groups which show no characteristic features of A, B, and C.

2.1.

When I said that compounds may be congruent in the two languages, I meant congruent in the sense of Marton (1968:56), i.e.

> If a Polish sentence or phrase consists of A, B, C, in this order and the English equivalent sentence or phrase consists of A′, B′, C′ in this order, then they are congruent if each of the pairs A : : A′, B : : B′, C : : C′ consists of equivalent items belonging to the same word class and having the same syntactic function in each of the sentences.

On closer examination, however, one has to come to the conclusion that over 90% of English compounds and a very large number of nominal phrases which are not compounded will not be considered congruent to their Polish equivalents. Thus, English nominal compounds have their equivalents in:

a) **Polish adjectival phrases** (adjectives are invariably denominal):
millstone : : kamień młyński
wood alcohol : : alkohol drzewny
gunpowder : : proch armatni
car mechanic : : mechanik samochodowy
milk bar : : bar mleczny
police dog : : pies policyjny

b) **Polish genitival phrases**

earthquake : : trzęsienie ziemi
car thief : : złodziej samochodów
mad house : : dom wariatów
Iron Age : : epoka żelaza
heart failure : : zawał serca

c) **Polish prepositional phrases**

chewing gum : : guma do żucia
washing machine : : maszyna do prania (=pralka, pralnicza)
nosebleed : : krwawienie z nosa
baking powder : : proszek do pieczenia
shaving cream : : krem do golenia

d) **Polish derived nominals**

rattlesnake : : grzechotnik
chimneysweep : : kominiarz
windmill : : wiatrak
darkroom : : ciemnia
silkworm : : jedwabnik
air rifle : : wiatrówka

Now, in view of these data and given the fact that nominal phrases are crucial in case contrastive studies are to have practical applications, one has to modify the notion of congruence by restricting the demand for the identity of word order. The demand has to be modified NOT because Polish is a "free word order language" (it is not!) but because there is an overriding principle which might be tentatively formulated in the following way: whenever two nominals (two "nouns" or their equivalents) form a syntactic group (are not compounds), a corresponding compound will have the two nominals permuted; whenever a compound corresponds to a derivative its second element is replacable by a suffix.

Similarly, the demand for the word-class identity seems to be inoperative if an equivalent phrase includes two or more referential indices. This revision, however, would need more of the theoretical apparatus which has been presented in sect. 1 above.

An alternative would be to say that examples under a—d contain only equivalent but not congruent constructions. Yet this solution would force one to make intuitionally implausible claims to the effect that a competent bilingual sees no difference between relations subsumed under a—d above and those listed as e—g below:

e) **Polish root-nouns**

arrowhead : : grot
saw dust : : trociny
blackmail : : szantaż
crosseye : : zez

sleepwalker :: lunatyk
redwing : : drozd (rdzawoboczny)
bull ring : : arena
limestone : : wapień
blackbird : : kos

and most of other behavrihi compounds.

f) Polish sentence- equivalent descriptions:

eyespot : : oko w kształcie plamki barwnikowej, prymitywny organ wzroku u niższych gatunków zwierząt,
impregnated-tape metal-arc welding : : spawanie łukowe elektrodą metalową owiniętą taśmą izolacyjną
and a vast number of other scientific and technical terms.

g) Polish translation equivalents (phrases of different referential source):

nutcracker : : dziadek do orzechów (lit. "grandfather+for+nuts gen. pl.")
ladybird : : boża krówka ("God's little cow dimin.")
waterwheel : : młyn wodny ("water mill"—Adj. phrase)
watertower : : wieża ciśnień (pressure gen. pl. tower"—Gen. phrase)

2.2.

If contrastive language studies aim at constructing a Contrastive Generative Grammar, one might expect that CGG would predict the inter-language lexical equivalence, or, in other words, CGG will be able to explain why certain classes of compounds correspond to derivatives and others to syntactic phrases (in case a class of a particular type does not exist, CGG should account for this fact).

In the present section I shall try to re-classify English compounds and look whenever possible for any regularities among their Polish equivalents.

In accordance with what has been said in section 1.1., compounds will be viewed as sets of indexical arguments "in search of their predicates". This could lead to classifying all compounds into two basic types:

A. surface reflection of underlying LINKING[11] processes,

B. surface reflection of underlying NON-LINKING processes.

Type A comprises all compounds whose members may be thought of as indices which do not have to be specified with respect to roles and which will have to be specified with respect to generality - specificity properties (but cf. 1.1.3. Predicates here are of the abstract character similar to those known from class logic. Linking compounds are of two types:

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[11] By linking and non-linking processes I mean processes presented in Weinreich (1966).

A-1. **PATHWAY**: arguments are linked with the help of an abstract predicate identical to the one which specifies the operation of class inclusion; of the two arguments the more specific one is topicalized.

E.g.: *codfish, palmtree, foodstuff, troutfish, marriage relationship*. Polish equivalents of compounds which belong here are usually root words or derivatives (unless stylistically marked). In both cases second member tends to be disregarded.

A-2. comprises a number of subtypes each of which represents a less abstract (more language-specific) predicate due to the operation of the determiner topicalization redundancy rule;

A-2.1. **HAMMER-AX** abstract predicate corresponding to the **AX-HAMMER** logical class intersection operator, topicalization is determined by extralinguistic factors.

E.g.: *fighter-bomber, director-composer, girl child, girlfriend, servant girl, man servant*, etc.

Since a corresponding class of Polish compounds (e.g. *statek baza, klubo-kawiarnia, meblościanka, trawler-przetwórnia*) are of relatively recent origin, Polish equivalents of A-2.1. will be simplexes (root words and derivatives) or adjectival descriptive phrases.

A-2.2. **QUICKSILVER**: one argument compounds, predicate topicalized.

E.g.: *deafmute, darkroom, dry dock, short cut, White House, white meat*. In most cases Polish equivalents are adjectival phrases or compounds .In both cases the same topicalization pattern holds. Exocentric compounds seem to have no predictable equivalents unless borrowed from English: *paleface, redskin, longhair, bluebeard*.

Type B comprises compounds whose members are indices specified with respect to roles which do not have to be specified with respect to generality-specificity markings. Predicates here are those required by a given case-frame. Non-linking compounds may represent two general types:

B-1. none of the two arguments has been preformed before the composition process (i.e., none of the two arguments is a deverbal derivative or a deadjectival derivative),

B-2. one of the arguments is a deverbal derivative.

In Polish most nominal compounds represent type B-2 while in English both types seem equally productive.

To arrive at any valid generalizations it seems necessary to investigate the correspondences between all possible collocations of cases, plus their topicalization patterns and note the influence a given case-frame and topicalization has upon the type of equivalent offered in Polish. For instance, it seems that for the pattern: $F(x_{+\text{Locative}}+y_{+\text{Objective}})$ represented by e.g. *field mouse*, amost plausible equivalent would be the Polish adjectival phrase of the y+x order, while with a different topicalization pattern (e.g. *hen house*) one expects derived nominals as equivalent constructions. A similar pattern representing B-2 type (e.g. *cinema going*) would be related to equivalent prepositional phrases in Polish.

This part of the paper was rather a report on work in progress and the observations made cannot be accepted yet with any degree of certainty. It seems, however, that within this framework it would be possible to predict some of the student's "avoidance techniques" (i.e., to explain why they say "Then John entered the building where automobiles were put together", rather than "Then John entered the automobile assembly plant") and to prepare a set of exercises for practising correspondences between English compounds and Polish phrases and derivatives, or vice versa.

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BASIC CHARACTERISTICS OF COMPARATIVE CONSTRUCTIONS IN ENGLISH AND POLISH

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The limits of the present paper do not allow the presentation of such a vast subject as comparative construction in full details. We shall, therefore, limit ourselves to the discussion of the ways in which the most typical comparative constructions can be derived from underlying structures in both English and Polish. Our assumption concerning such a derivation is that in both the languages these constructions derive from underlying complex sentences. We shall adopt a more conservative approach here (rather then the recent one represented by Campbell and Wales (1969)) as it seems to suit our purpose better.

The way in which comparative constructions can be derived from underlying structures has been discussed for years, but linguists have not yet reached a unanimous point of view. Most who have dealt with the problem, including Smith (1961), Chomsky (1965) and Lees (1961), assume that comparative constructions derive from underlying complex sentences. The starting point for the derivation consists of a phrase marker which contains a matrix sentence and a constituent sentence parallel in structure. The constituent sentence is dominated by an adverb of extent or degree.

The above mentioned linguists, however, vary in opinion as to what the structures of the constituent sentences should be. Some of the proposals concerning the structure of the constituent sentence are:

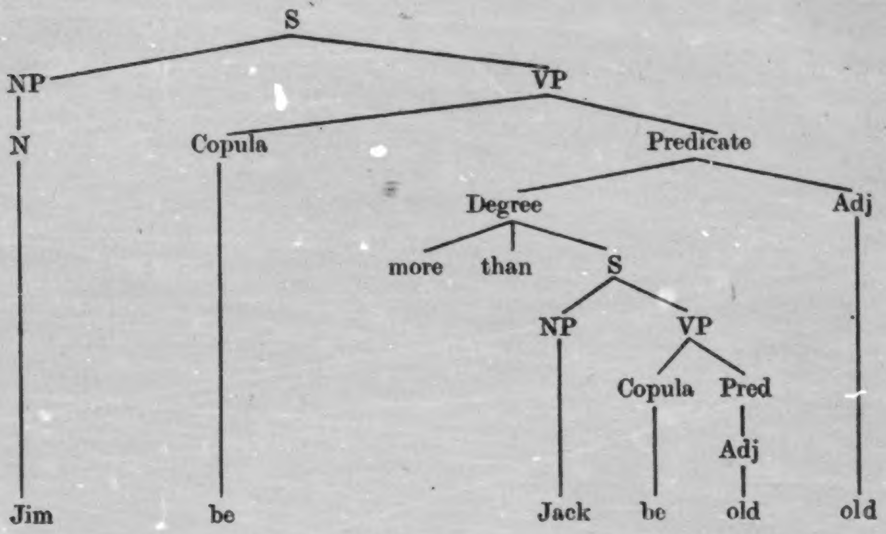
Nom — *be* — *Adj* (Chomsky 1965; Smith 1961)
Nom — *be* — *that* — *Adj* (Lees 1961)
Nom — *be-wh-* — *Adj* (Doherty and Schwartz 1968)
Nom — *be* — *than* — *Adj* (Hudddleston 1967)

In spite of the differences, these analyses are basically the same. According to all of them a comparative sentence of the kind

1. Jim is older than Jack.

will have the underlying representation

2.



The identical constituents are then deleted and constituents reordered.

A different point of view is represented by Campbell and Wales (1969), who claim that comparative constructions derive from simplex strings. In their opinion, it is difficult to see how a semantic analysis of comparatives can proceed from the usual type of syntactic base.

Sentences like

3. John is as clever as Bill.
4. John is more clever than Bill.

do not imply sentences like

5. John is clever.
6. Bill is clever.

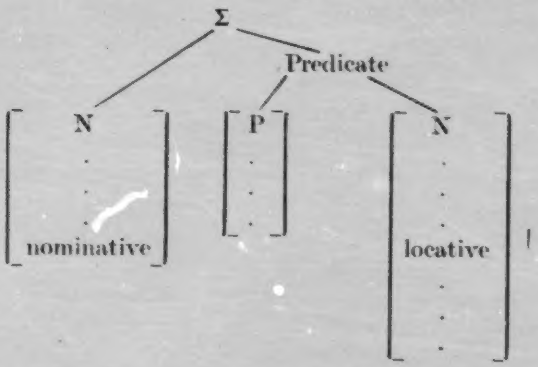
Campbell and Wales present an analysis in which the use of the optional deletion transformation is questioned and the comparative transformation is retained. Their proposal is similar to that of Fillmore (1968). Adjectives functioning in comparative constructions can be analysed as two-place predicates. Noun phrases, introduced as co-constituents of verbs, follow the verb in the underlying structures. Those associated with particular predicates have "notional" labels characterizing their functions in the sentence.

They may be interpreted as features of noun phrases introduced by subcategorization rules.

Case features relevant for comparatives are nominative (Fillmore's objective and locative).

In their view, an underlying structure where a subject has been formed may have the following representation:

7.


Σ
Predicate
N
nominative
P
N
locative

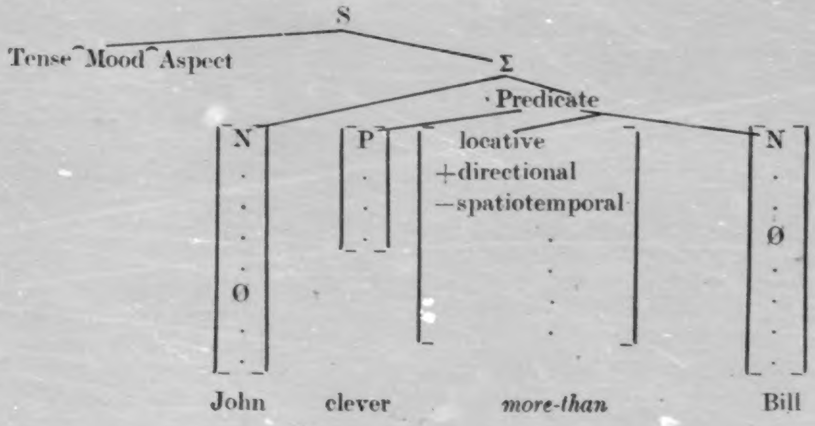
The case features of subject case——ø in env.——P are deleted and case features

8.

$$\begin{bmatrix} N \\ \cdot \\ \cdot \\ \cdot \\ \text{case} \end{bmatrix} \rightarrow \text{case} \begin{bmatrix} N \\ \cdot \\ \cdot \\ \cdot \\ 0 \end{bmatrix} \quad \text{in env. P——}$$

segmentalized by transformational rules. The resulting structure is:

9.


S
Tense⁀Mood⁀Aspect
Σ
Predicate
N
0
P
locative
+directional
−spatiotemporal
N
0
John
clever
more-than
Bill

Although Campbell and Wales are right in pointing out that older analyses need revising, it seems that these particular analyses may be more useful in explaining certain syntactic and semantic phenomena. Examples like the following:

10. During our second meeting she was as nice as when I first met her.

11. It is much quicker to fly than to go by boat.

12. W nocy jest chłodniej niż w dzień.

show that two adverbs or two adverbial clauses may occur in a comparative constructions instead of two noun phrases which might be associated with two predicates. They must be of the same notional type, otherwise we would get examples like

13.* It is colder at night than on the outside.

In simplex sentence, however, two adverbials of the same type do not occur, even if they are selected for different clauses of complex sentences. Thus, although the assumption that comparative constructions derive from simplex sentences might be accepted for the sentences of type 1, it is not possible for sentences like 10, 11, and 12. As the result, the claim that these two types have a different derivation would be unavoidable.

In Polish, noun phrases usually precede the finite verb in the main clause. Those which are introduced by *jak* or *niż* are not permitted in this position.

14.* Niż Piotr jest wyższy Jan.

15.* Jak Paweł jest sympatyczny Piotr.

Noun phrases introduced by *od* require enumeration of more people:

16. Od Piotra jest wyższy Paweł, od Pawła Jan, etc...

Thus, a special status is indicated for these noun phrases.

We may claim that comparatives should be represented as complex strings consisting of main clause and constituent clause at a certain stage of derivation. The Relative Clause Formation transformation may provide evidence for our claim. It is a variable rule in English. Therefore, a sentence like the following

17. Bill earns exactly the sum which I thought Paul earned.

is acceptable in English. In Polish the noun phrase which is to be relativized may not move over clause boundaries.

18.* Kowalski zarabia dokładnie taką sumę, o jakiej myślałem, że zarabia Wiśniewski.

In the case of comparative constructions, similar restrictions operate. If two sentences on which the comparative transformation operates are separated by an intermediate S node, and if the most deeply embedded sentence cannot be completely erased after the transformation has applied, the sentence which results is not acceptable in Polish.

19. Maria jest bogatsza niż myślałem.

In 19 the most deeply embedded sentence is erased.

20.* Maria jest bogatsza niż myślałem, że Basia jest.

Unfortunately, not much can be said about the underlying structure of complex strings and equally little about the transformations that map these structures onto the surface. It seems that the underlying strings must have a kind of relational marker which is sometimes realized as *that*, or, in other analyses, as *than* (Lees 1961 and Huddleston 1967).

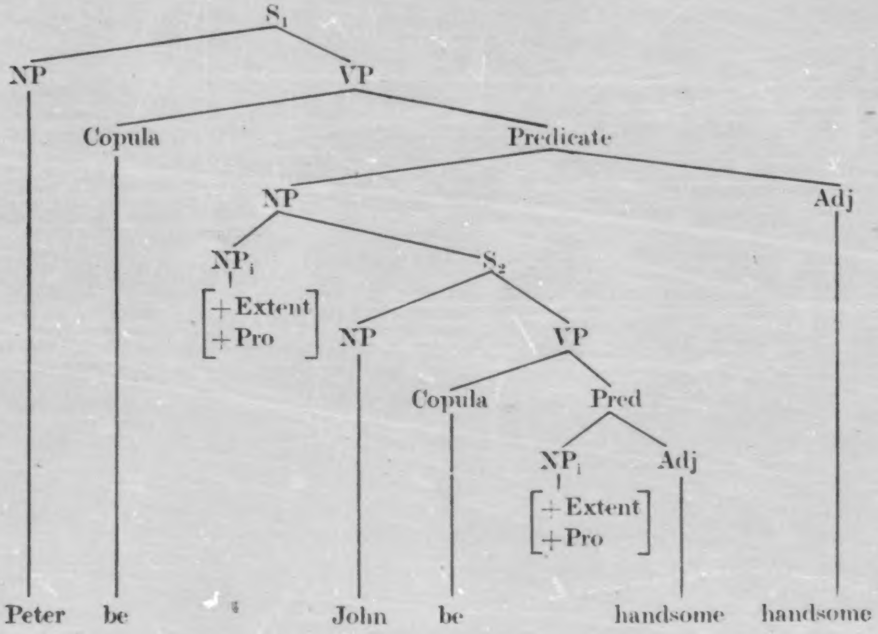
In 1. *old* is a point on the scale of *old—young*. In this and other comparative constructions the adjectives refer to scales rather particular points on these scales. Comparative formatives designate the values on these scales. We may assume that two strings in the underlying representations of comparative constructions contain adverbs of extent which may be represented as nominal pro-forms bearing the feature [+Extent], since adverbs are usually dominated by an NP node at some stage of derivation. The adverbs of extent mark the same point on a certain scale of an antonymous pair of adjectives. Referential indices must be identical for two adverbs.

The underlying structure of

21. Peter is as handsome as John.

may be represented as follows:

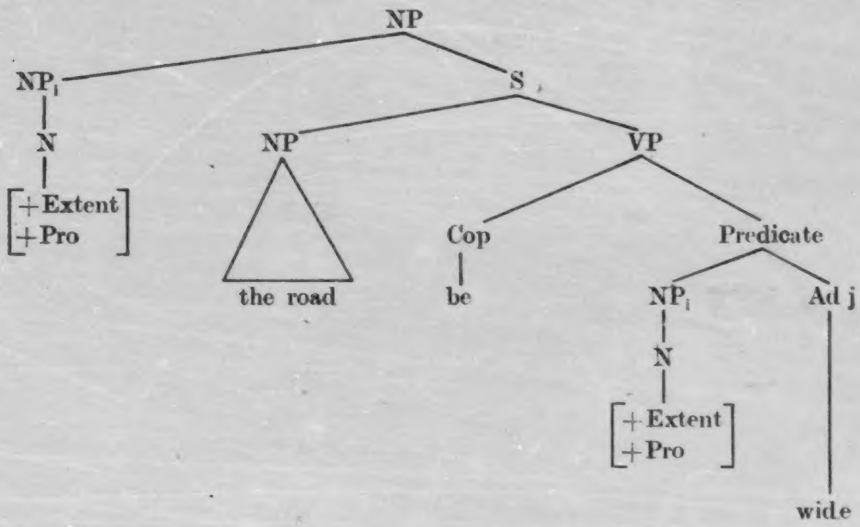
22.



Such an underlying structure may also account for adverbs like *extremely*, *amazingly*, since they may be chosen instead of comparatives. The embedded relative clause would have the form *the extent is amazing*.

Also nominalizations such as *depth*, *width*, *strength* can be derived from relative clauses whose head nouns have the features [+Pro] and [+Extent]. The underlying structure of *the width of the road* would be the following:

23.



The constituent sentence in the underlying structure of comparative constructions is a restrictive relative clause which is attached to an adverb of extent (or to a case node [+Extent]). These restricted relatives represent presupposed information.

In the underlying structure the conjunct that is known or is assumed to be known to the hearer appears as a restrictive relative clause in the derived structure. In 1. Jack's age is known to the hearer and new information is given only to Jim's age:

24. Jack is old to a certain degree.

The above sentence is also presupposed by the negated version of 1.

25. John is handsome to a certain extent.

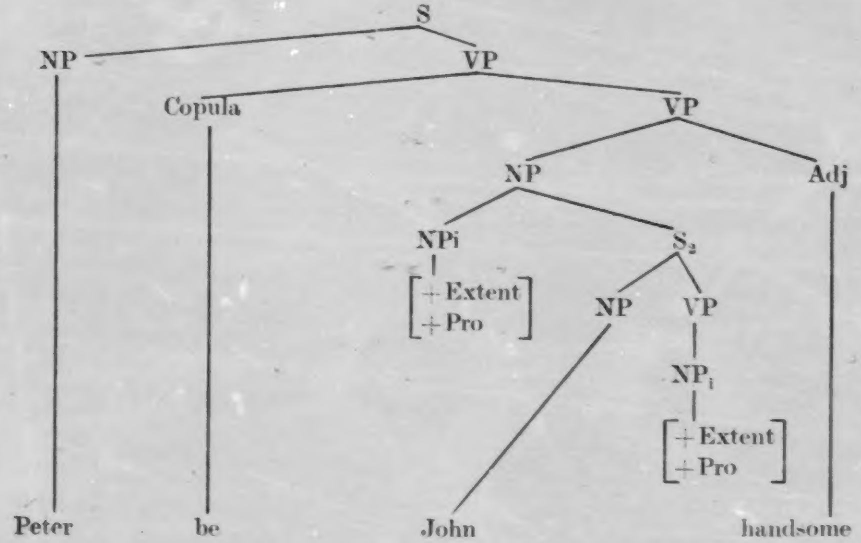
is one of the presuppositions of 21 and may occur as a relative clause in the derivation of comparatives such as 21.

As we have already stated, not much can be said about the rules that map underlying structures onto the surface. The Relative Clause Formation transformation has to apply at a certain point and Extraposition usually follows. The adverb of extent is relativized and adjoined to the S node of the relative clause. [+Extent], [+Pro], [+Rel] are realized as *as* in English and *jak* in Polish. *As* and *tak* may be treated as realizations of adverbial pro-forms antecendant to the relative clause. A nominal phrase usually follows the adjective in the derived structure. It is also the case with copula which may be deleted optionally.

After it has undergone the Relative Clause Formation and Extraposition transformations, the relative clause is attached to the highest S node. Both Relative Clause Formation and Extrapositions transformations are post-cyclical. We cannot claim that the Comparative transformation is a post-cyclical transformation too, since we can account for certain data only if we assume that Comparative transformation precedes both Relative Clause Formation and Extraposition transformations. A detailed presentation of the derivation of 21 may help us to support our assumption.

Let us neglect tense, aspect, etc. and assume that the Comparative transformation is the first one that applies to a marker like 22. The adjective *handsome* and (optionally) the copula in the embedded sentence are then erased.

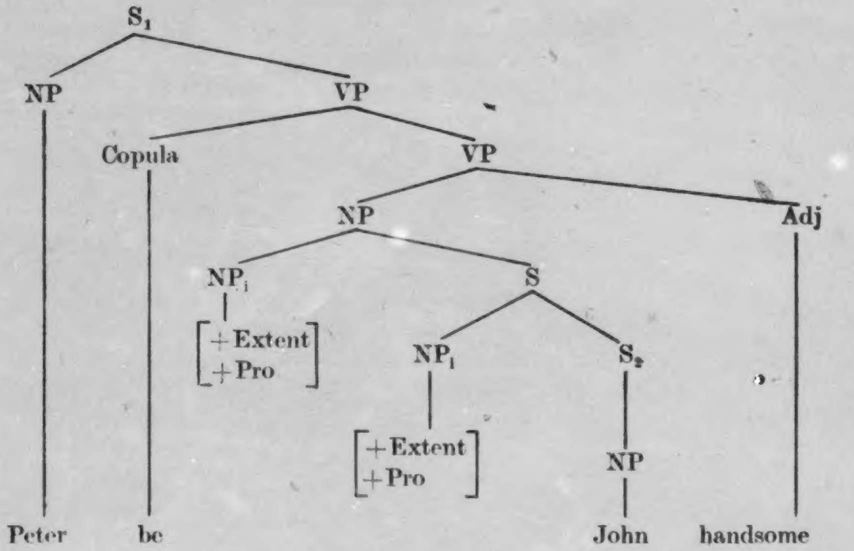
26.



The VP nodes are pruned since they do not dominate a verbal element any longer.

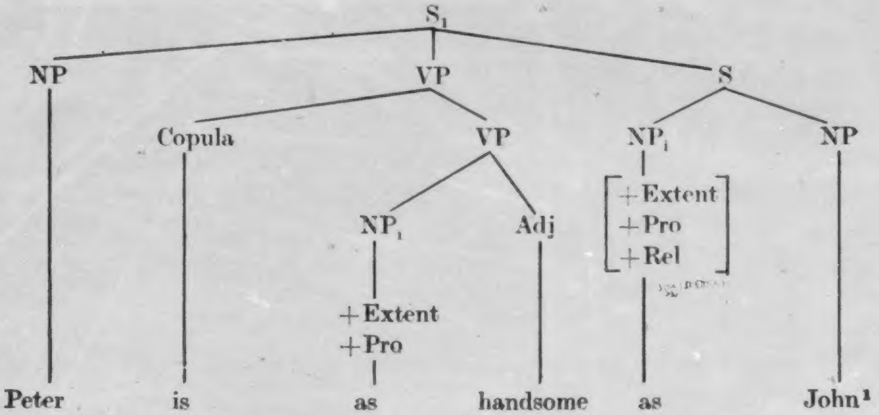
Relative Clause Formation transformation follows and adjoins the "extent adverb" of the embedded clause to the left of S_2.

27.


S₁
NP
VP
Copula
VP
NP
Adj
NP_i
+Extent
+Pro
S
NP_i
S₂
+Extent
+Pro
NP
Peter
be
John
handsome

Now the Extraposition transformation moves the S node dominating S_2 to the end of the sentence and attaches it to S_1.

28.


S₁
NP
VP
S
Copula
VP
NP_i
NP
+Extent
+Pro
+Rel
NP_i
Adj
+Extent
+Pro
Peter
is
as
handsome
as
John¹

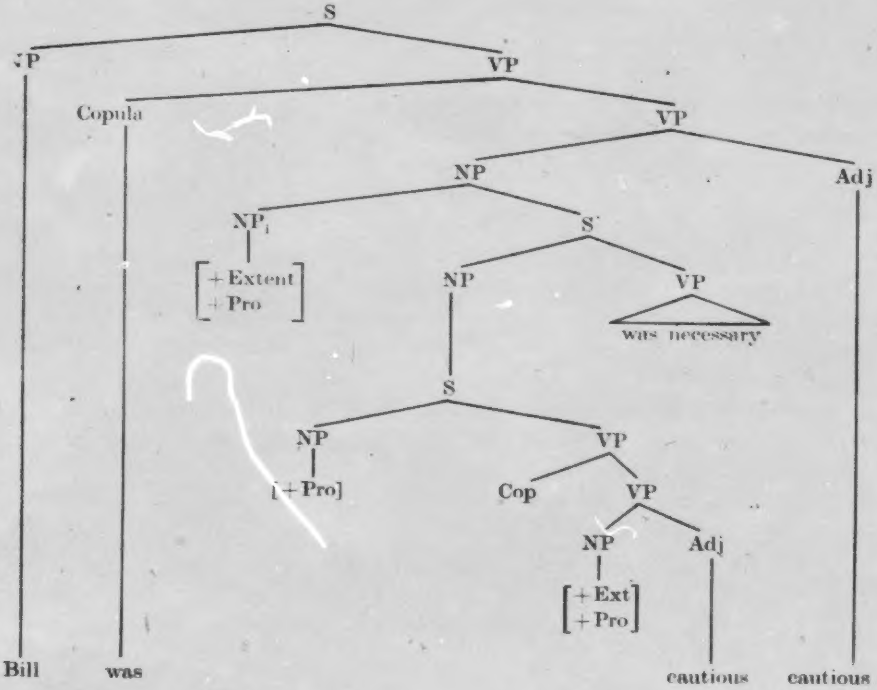
---

[1] In the case of examples like:
a) Bill was more cautious than was necessary.
b) Bill był bardziej ostrożny niż było trzeba.

The Comparative transformation is obligatory for lexical categories and optional for auxiliary ones. When underlying representations like 22 undergo the Comparative transformation, all or most of the elements in the constituent sentence which are identical to those in the matrix sentence are erased. This deletion of identical elements is obligatory for adjectives and adverbials. Identical subjects may be either pronominalized or deleted.

c) Bill was as cautious as necessary.
d) Bill był tak ostrożny jak było trzeba.

here the underlying structure of c) is the following:



the Relative Clause Formation transformation cannot apply. (cf. Sentential Subject Constraint, Ross 1967: 134). But constituents can be moved out of extraposed sentential subjects. Thus, the transformations would have to operate in the following order: Extraposition, Relative Clause Formation and Comparative.

The above examples, however, cannot undergo Extraposition transformation because expletive *it* does not appear in such sentences. Most of the sentence of this type become unacceptable if *it* is introduced.

*Bill eats more than it is healthy.

We have, therefore, to assume that the Comparative transformation precedes the Relative Clause Formation and Extraposition transformations.

29. The hall is wider than it is long.

30. * The hall is wider than the hall is long.

The deletion is optional for auxiliaries and verbs. In English we may delete the main verb or the adjective without deleting the auxiliaries.

31. He smokes more cigarettes than I (do).

In Polish the deletion of the second copula/verb and the adjective is obligatory in certain situations or it may be optional:

32. jest dłuższy niż szerszy

33. zarabia tyle ile Wiśniewski

34. jest tak biały jak (biały jest) śnieg

A sentence like the following:

35. Rozwiązałem zadanie szybciej niż ty to zrobiłeś.

is the only case where the verb *robić* is treated like a pro-form (together with the pronoun *to* it represents the action mentioned in the matrix and corresponds exactly to English *did* in: *I solved the problem earlier than you did*).

The structures of differentiating comparatives will be similar to the structure of equative ones. The only difference is in the presence of elements which usually occur in interrogative and negative constructions (*ever* and *need* in English and *kiedykolwiek* in Polish).

36. On jest uczciwszy niż ty kiedykolwiek będziesz.

On these bases we may claim that comparatives such as 1. derive from underlying structures such as 22, but the constituent of the underlying structure is negated in the case of non-equative comparative constructions. This may explain the non-existence of examples like

37. * Mary is prettier than Mary is not.

since we assume the negation of the constituent is deleted in the course of derivation of non-equative comparatives.

The following examples also illustrate the relations existing between negation and non-equation:

38. Bill was more careful than was necessary.

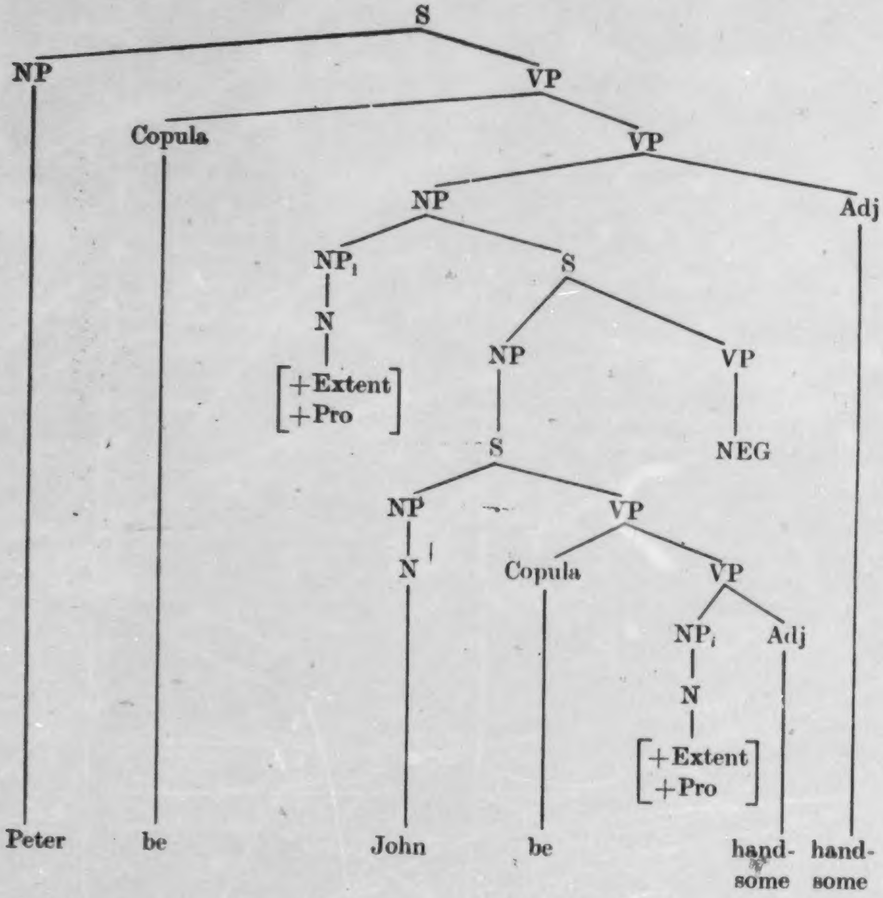
39. It was not necessary to be as careful as Bill was. This claim can also be supported by the fact that in certain European languages (French, Spanish, Italian) negated particles may appear on the surface structure of sentences. Also constructions of the type *to*+infinitival and comparative constructions were once equivalent in English. *Too* usually implies negation and the same criteria could be applied when analysing *than*.

40. She knew better than to lie =Too well to lie.

It has also been suggested by some linguists that *than* derives from Old English *þonne* which is a combination of instrumental *þon* and negative *ne*.

The underlying structures of non-equative comparatives could thus be like the following:

41.


S
NP
VP
Copula
VP
NP
Adj
NP_i
S
N
NP
VP
+Extent
+Pro
S
NEG
NP
VP
N
Copula
VP
NP_i
Adj
N
+Extent
+Pro
Peter
be
John
be
hand-some
hand-some

The above underlying structure of non-equative comparative must contain some directional marker which implies that one of the persons mentioned in the example moves further in the positive direction on the scale *handsome — ugly*. It is not clear how this marker is introduced in underlying representations like the above. Its presence may be governed by the presence of negation in the constituent sentence since it does not occur in equative comparatives.

Finally, two conditions should be mentioned here, both of them connected with deletion. The first one, the condition of minimum identity, rules out constructions like

42. *Bill runs faster than Mary is beautiful.
43. *The wall is thicker than it is thick.

and may be formulated in the following way: two clauses undergoing the Comparative transformation may not contain either identical subjects or identical adjectives. As it stands now, the condition would, however, rule out some of perfectly acceptable English sentences. It is not yet quite clear how it should be modified.

The condition of minimum difference requires that strings undergoing the Comparative transformation must have two equivalent substrings which have not been replaced by identical lexical items. These may be noun phrases, adjectives, auxiliaries, verbs or adverbials. The condition should exclude the following examples:

44. *Nocą jest chłodniej niż na dworze.

There are, however, examples which contradict the above condition:

45. Piotr jest bardziej niż niegrzeczny.

46. Ta książka jest bardziej niż obrzydliwa.

Both these conditions, being not quite clear at present, require further investigation and modification.

Summing up, we have assumed that in both English and Polish comparative constructions derive from underlying complex sentences. Transformations which operate in the course of derivation of these constructions are the same in Polish and English and they seem to prove that in both languages the process of derivation is similar. The structure of the constituent sentence is still a subject for discussion. The English structure has been described above and the Polish structure corresponds more or less to that suggested for English by Lees (1961) and Huddleston (1967).

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POLISH AND ENGLISH PSEUDO-REFLEXIVES

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The Polish "reflexive verbs" have been a troublesome topic for linguists and language teachers. The problem lies not only in the overabundance of expressions using a reflexive pronoun, when the action described is not reflected onto the surface structure subject, but also in the variety of componential features which may be assigned to them. This diversity is confusing even to sophisticated Polish speakers; it becomes further complicated when Polish is contrasted with English, which very seldom uses these pronouns even for authentically reflexive actions.

The approach used in this paper in trying to solve this problem is based on a semantic analysis of over one thousand Polish sentences and their English translation. Seven classes of "reflexive" and "pseudo-reflexive" verbs are established: Total Reflexive, Part Reflexive, Directed Benefactive, Observed Benefactive, Reciprocal, Passive, and Emissive. "Pseudo-reflexives" are either verbs which are not marked for reflexiveness when they should be or verbs which are marked when they should not be. For each category, a semantic representation is provided first in a drawing then through trees in a case-grammar framework similar to that of Fillmore.

All seven types of verbs are analyzed in groups. They are discussed successively, and always in the same order, under each of the following subdivisions: Syntactic Considerations, Semantic Considerations, Underlying Structures, Transformations, and Surface Structures. The description of the semantic contents and deep structure syntactic features, which are common both to Polish and English, offers interesting pedagogical implications as it affords a tool for generating acceptable sentences in either language.

1. *Introductory Remarks.*

There seems to be a connection between English pseudo-intransitives of the type

I wash every day.
He shaves every morning.
She dresses well.

where the direct objects have been deleted, and the following faulty Polish structures produced by English speakers:

Która najlepiej Ci podoba?

instead of: *Która najlepiej Ci się podoba?*
for: *Which one do you like best?*

Ja wstydzę

instead of: *Ja się wstydzę*, or *Wstydzę się.*
for: *I am ashamed.*
and *Myję swoje ręce.*
instead of: *Myję ręce* or *Myję sobie ręce.*
for: *I wash (am washing) my hands.*

What is the nature of this resemblance? It appears that we have a deletion of what is usually called "reflexive pronoun", that is, a form in — *self* in English and *się*, *siebie*, *sobie* or *sobą* in Polish. But while the deletion is sometimes permissible in English, it usually creates an incoherent or ungrammatical sentence in Polish.

By way of introduction, let us examine a short paragraph in Polish and a proposed translation into English, paying special attention to the verbs and the noun phrases accompanying, them in order to determine what kind of correspondence or equivalence might exist between the Polish and English expressions.

Zainteresowałem się tym dlaczego studenci amerykańscy uczący się polskiego i studenci polscy uczący się angielskiego spotykają się z wielkimi trudnościami i nie dają sobie rady z właściwym użyciem czasowników zwrotnych, nawet kiedy pomagają sobie wzajemnie i razem głowią się nad tłumaczeniem, które im się podoba. Okazało się, że spośród przeszło tysiąca polskich czasowników tak zwanych zwrotnych, wiele legitymuje się jedynie formą zwrotną.

I became interested in the reason why American students learning Polish and Polish students learning. English encounter great difficulties and are unable to cope with the proper usage of reflexive verbs even when they help one another and rack their brains together on a translation which they like. It appeared that among over one thousand Polish so-called reflexive verbs many prove to be reflexive in form only.

2. *The Problem.*

On the basis of these short semantically equivalent paragraphs, several hypotheses can be postulated delineating the problem or difficulties met in translating from Polish into English or vice versa.

2.1. Not all Polish verbs which seem reflexive are genuine reflexive verbs.

2.2. Polish shows an overabundance of 'reflexive' verb phrases, English seldom uses such structures.

2.3. Although all Polish sentences in the sample text use similar structures of complementation in the active voice, the English sentences display various types of verbal structures.

2.4. These structural differences between the two languages do not correspond to semantic differences as the basic meaning of the message is preserved in the translation of the text from one language into the other.

2.5. Semantics might thus be very helpful in setting up a strategy which would enable the language learner to translate pseudo-reflexives from his native or source language into the target language.

3. *The Analysis.*

3.1. *Definitions.*

3.1.1. *Pronominal Verbs.* Polish verb phrases that contain the so-called reflexive pronoun *się* or its variants *siebie, sobie* and *sobą* are sometimes called 'pronominal' (Szlifersztejnowa: 1968, 1969). This term does not seem to appear in the writings dealing with English verbs. It is impractical on several accounts because it lumps together verbs whose deep structure subjects emerge on the surface structure as subjects in

Studenci uczący się polskiego
Studenci nie dają sobie rady.

or complements in various syntactic cases like instrumental *tym* in

Zainteresowałem się tym.

and sometimes even seem not to emerge at all in:

Okazało się.

Some of the pronominal verbs are genuine reflexive verbs; others only look reflexive and for that reason are called here pseudo-reflexives.

3.1.2. *Genuine Reflexive Verbs or Reflexive Verbs.*

3.1.2.1. Any Polish pronominal verb in which *się* (or its variants) is a pronominalized deep structure NP returning or "reflecting" the action back onto the subject which performs the action.

Studenci polscy uczący się

corresponding to the underlying structure

**Studenci polscy uczyć studenci polscy*

where *Studenci polscy* is both agent and patient.

3.1.2.2. Some Polish pronominal verbs in which the deep structure reflexive NP is pronominalized as *sobie*
the deep structure reflexive NP is pronominalized as *sobie*

Zawsze mówi o sobie.

for: *He always speaks about himself*, or *sobą*.

Widocznie nie gardzi sobą.

for: *Obviously he does not despise himself.*
(cf. Klemensiewicz 1946; Szober 1963; Bisko, Karolak, Wasilewska and Kryński 1966).

3.1.2.3. English transitive verbs where deep structure subject and object are identical and the object is pronominalized in *-self*. (Jespersen 1937; Lees and Klima 1963). This complement may have one of the following functions:

Direct object:	*He shaved himself.*
Indirect object:	*He allowed himself no rest.*
Subjective complement:	*He is always himself.*
Prepositional complement:	*He looked at himself.*

All these non-emphatic reflexive pronouns may be used either with obligatorily reflexive verbs, such as *pride oneself* (*on*), with optionally reflexive verbs such as *dress* (*oneself*), or with non-reflexive verbs to indicate co-referentiality of two NP's such as

John protects himself.

in contrast with

John protects me.

(Quirk, Greenbaum, Leech and Svartvik 1972). The deletion of optional reflexive pronouns or their replacement by objective personal pronouns is described below under English pseudo-reflexives.

3.1.3. *Pseudo-Reflexive Verbs.*

3.1.3.1. Any Polish pronominal verb phrase whose *się* is found not to be reflexive in the deep structure. Hadlich (1968: 112) reported the existence of such verbs in Spanish and called them "inherent" reflexives because they "have a special lexical (not grammatical) characteristic requiring that they have the reflexive form". Various tests may be used to ascertain the deep structure reflexive syntactic feature of *się*. Some of them have been adequately described in other places (cf. Starosta 1971 : 444). Another very simple test consists in substituting *siebie* for *się* on the surface structure. Generally, pseudo-reflexives can't take *siebie*. However, this test is somewhat imperfect because it does not sift out reciprocals of the type

Jan i Józef patrzą na siebie i nie widzą się.
John and Joseph are looking at each other and don't see one another.

3.1.3.2. Any English pseudo-intransitive verb phrase of the type I *wash* when the meaning is the reflexive *I wash myself*. Some other verbs belonging to this class are *adjust, dress, shave*. The deletion of the reflexive object makes the verb look intransitive but the sentence is somehow not felt ambiguous because in the absence of any object it is assumed that the action performed by the subject is at the same time experienced by the same subject. As Starosta (1971 : 445) says, "the most common situation in modern shaving is that one shaves oneself, (just as the person one washes most often is oneself). So it is natural that these presumptions come to be associated with the verbs when no object is present".

3.1.3.3. Any English verbal phrase using a possessive adjective to determine the object NP which is a part of the subject of the sentence

I wash my hands.
Van Gogh cut off his own ear. (Postal 1969:208f. 15)

3.1.3.4. Most verbal phrases using an objective personal pronoun for a NP despite co-reference with the subject.

John has no covering over him.

These pronouns are usually found in prepositional adverbial phrases expressing spatial relationship between two NP belonging to different component source sentences (Lees and Klima 1963).

3.2. *Frequency and Productivity.*

The variety of pseudo-reflexives observed both in English and Polish may constitute a real problem for the language learner or the translator if these forms are abundant and frequently used. A statistical analysis might help in determining the extent of this problem.

3.2.1. *Polish Pronominal Verbs.*

Since genuine reflexive verbs are structually practically undistinguishable from pseudo-reflexives, all pronominal verbs had to be counted. About one thousand verbs of this morphological type were found in Szober's (1969)

Slownik poprawnej polszczyzny, which lists difficult lexical items and constructions; another few hundred were discovered in the Stanisławski's (1970) and Kościuszko foundation dictionaries. But a mere reference to quantitative occurrence being insufficient to prove the frequency of usage, the latter was checked in three sample texts of 3000 words each: a literary fragment (Maria Dąbrowska, *Noce i dnie*), a semi-scientific journal (*Problemy*) and an informal daily newspaper (*Gazeta Krakowska*). The percentage of reflexive or pseudo-reflexive forms in comparison with the total number of verbs used on each of these three different stylistic levels is indicated in table 1.

Table 1

	Words	*Verbs*	*Pronominal Verbs*	*Ratio*
Dąbrowska, M. *Noce i dnie* P. 25–37	3000	594	122	20.5%
Brzostkiewicz, S.R."Księga obrotów". *Problemy* II, 1973	3000	327	52	15.9%
Gazeta krakowska X, 1973	3700	423	68	16%

3.2.2. *English Reflexive Verbs.*

The word count of English reflexive verbs entered in various dictionaries is much more difficult because this characteristic is either poorly indicated or not at all (cf. *wash* in *The American college dictionary* 1957 and *The Kościuszko foundation dictionary* 1961, 1972). Because of its inefficiency this task appeared useless and was not performed. I did, however, scan various texts as I had done for Polish and obtained the following figures:

Table 2

	Words	*Verbs*	*Reflexive Verbs*	*Ratio*
Fromm, E. *The Art of loving*	3000	107	9	9%
Heller, J. *Catch 22*	3000	528	2	0,4%
The Conn. Alumnus X, 1972	3000	534	2	0,4%

Thus, on the basis of these limited word counts, it seems that our hypothesis has been verified. To a plethora of Polish pronominal verbs corresponds a paucity of English reflexive verbs.

This observation does not mean that English reflexive verbs have not preoccupied grammarians; the following sentence would quickly disprove such a belief:

> *John kept himself from expecting himself to prevent himself from believing himself to be proud of himself.* (Jacobs and Rosenbaum 1968).

As a matter of fact, English reflexive pronominalization has been studied by many linguists of all schools, described in all bilingual contrastive studies published by the University of Chicago. However, the acute discrepancy in the frequency and productivity of pronominal forms in Polish and English might begin to explain the difficulties encountered by the language learner.

3.3. *Syntactic Considerations.*

To enable the student to translate Polish pronominal verbs into English non-pronominal verbal structures, one must provide him with a table or a list of these various English structures and a key explaining the correspondences between the two languages. The following structures translate most Polish pronominal verbs and deserve our attention:

A. Transitive Verb+(prep)+*-self*
generalized from

They behave themselves=Zachowują się.

It should be noticed here that although *teaching oneself something* is grammatical, it is not normally used because English prefers *learning something.* However, it is perfectly congruous and belongs to this class of verbs called reflexives.

B. Transitive Verb+possessive+NP
generalized from

They rack their brains=Głowią się

This structure was called an English pseudo-reflexive in 3.1.3.3.

C. $$\begin{bmatrix}\text{Transitive Verb}\\ \text{have, get, take}\end{bmatrix} + \text{-}self + \begin{bmatrix}\text{NP}\\ \begin{Bmatrix}\text{NP}\\ \text{Past Participle}\end{Bmatrix}\end{bmatrix}$$

generalized from

I am buying myself a new Fiat=
Kupuję sobie nowego Fiata.

and *I got myself hired (by someone)=*
Wynająłem się do pracy (u kogoś).

D. $$\begin{Bmatrix}\text{Find}\\ \text{Observe}\end{Bmatrix} + \text{NP} + \text{Adj} + (\text{to one})$$

generalized from

I find this useful (*to me*)=
To mi się przydaje.

Just as in structure A it should be noticed that some perfectly grammatical sentences are not used because of the existence of some lexical items which, probably because of their simplicity, have come to replace them. For instance

They like it.
for *They find it pleasing* (*to them*)=
Im się podoba.

E. Transitive verb+*each other, one another*

generalized from:

They look at each other and don't see one another=
Patrzą na siebie i nie widzą się.
They help one another=
Pomagają sobie (*wzajemnie*).

F.
$$\left[\begin{array}{l}\text{be, become, get, feel}\\ \\ \left\{\begin{array}{l}\text{become, get}\\ \text{come, go, grow, turn, wear}\end{array}\right\}\end{array}\right] + \left[\begin{array}{l}\left\{\begin{array}{l}\text{Past Participle}\\ \text{Adjective+Infinitive}\end{array}\right\}\\ \\ \text{Adjective}\end{array}\right]$$

generalized from:

I became interested=
Zainteresowalem się,
Students are unable to cope=
Studenci nie dają sobie rady.
I feel sleepy=
Chce mi się spać.
He is growing old=
Starzeje się.

G.
$$\left[\begin{array}{l}\text{make, cause}\\ \text{Intrasitive Verb}\end{array}\right] + \left[\begin{array}{c}\text{NP}\\ \emptyset\end{array}\right]$$

generalized from

He made a lot of trouble=He brawled (*a lot*).
Bardzo awanturowal się.

As one can see, this classification on the basis of surface structures is quite complicated. But still, that is not its major weakness, which is found rather in the almost absolute impossibility to predict which Polish pronominal verb phrase will be translated by which English verbal phrase belonging to which set of structures.

Confronted with this situation where form and surface syntax are inadequate to solve the problem under investigation, attention was turned to the underlying syntactic features and to semantics.

3.4. *Semantic Considerations.*

3.4.1. *Semantic equivalence in both languages.*

After I had a list of one thousand Polish pronominal verbs drawn up with sample sentences translated into English, I asked my forty students in the 4th year translation classes to analyze both the Polish and English sentences and to seek a number of alternative solutions in order to explore the full range of structural contrasts in English (cf. Rivers 1970). Out of all English paraphrasing sentences, we selected the one which was most equivalent to each Polish sentence, whether it was listed in a dictionary or not; equivalent sentences being defined as those sentences which have identical semantic input, including lexical referents and syntactic features (Krzeszowski 1972).

This exercise was found to be very useful because it invalidated my fifth year students' claim that sophisticated Poles are well aware of which pronominal verbs are reflexive and because it showed that these surface structures have very little to do with the semantic input into the sentences (Fillmore 1968; Szlifersztejnowa 1968, 1969), since they all look alike with pronominal verb phrases. Although perfective verbs derived from imperfectives through some form of prefixation:

napić się, *upić się*, *popić sobie* versus *pić*

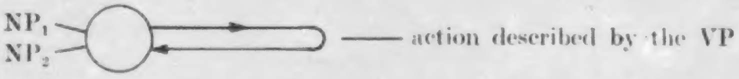
seem to be more numerous than other classes of verbs among Polish pseudo-reflexives, I have not been able to discover any rigorous correspondence. We have for instance *przepić*, *wypić*. The form of reflexive pronoun used is somewhat more helpful, but only to analyze the meaning of the pronominal verb phrase of which it is a constituent. It thus appeared absolutely necessary to establish some kind of procedure to analyze the deep structure relationship among the constituents of each sentence containing a pronominal verb phrase.

3.4.2. *Semantic representations.*

Since the actions, events or states described in both languages are identical, some non-linguistic semantic representations afford the clearest picture of the abstract concepts at the basis of the linguistic expressions we wish to analyze and interpret.

For each of the seven sets of the surface structures discovered through he syntactic analysis, a picture is drawn to define the relationship among the deep structure VP and the various NP's.

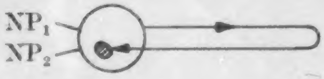
A.



Total Reflexive: The action is instigated and performed by NP_1, it is also ompletely reflected onto NP_1 or NP_2 which is identical with NP_1.

They behave themselves = Zachowują się.
He teaches himself something = Uczy się czegoś.

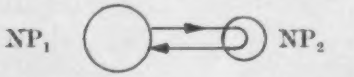
B.



Part Reflexive: The action is instigated and performed by NP_1, it is relected onto NP_2 which is a part or an inalienable possession of NP_1:

They rack their brains = Głowią się.
I washed my hands = Myłem ręce.

C.



Directed Benefactive: The action is instigated and performed by NP_1; NP_2 is a kind of passive object or person used by NP_1 for its own benefit, which may be advantageous or detrimental.

I got myself hired (by someone) =
Wynająłem się do pracy (u kogoś).

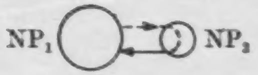
In both sentences, the emphasis is placed on NP_1 or *Ja*; NP_2 (the employer) has so little importance that it does not even need to be expressed.

In: *Ożenił się =*

He got married (with the meaning: *He got himself a wife*) the same emphasis is placed on NP_1 *On*; NP_2 has no choice in the matter. It is interesting to note in this respect that when a woman gets married it is said that she steps behind a man. However, with the generalized emancipation of women, this formula is being replaced with:

Pobrali się = They took each other (for husband and wife) which clearly indicates equality of sexes.

D.



Observed Benefactive: Like in the Directed Benefactive, the action is performed for the benefit of NP_1. However, the emphasis is placed on NP_2 which becomes the apparent instigator of the action and for that reason is chosen to occupy the surface structure position. In reality without the initial instigation by NP_1, the event would not take place. In this group we find mostly *verba affecta* which indicate a feeling, a state experienced by or affecting NP_1. Instead of a benefactive directed by NP_1, we have a benefactive observed by NP_1. The same concept exists in some Romance dialects. In fact, it is easily conceivable that "any verb may, ad libitum, represent 'a behavior directed by the subject' or 'a behavior observed by the subject'. When the second conception takes root in the mind, one may soon observe an irresistible invasion, and at first quite surprising, of the synthesis voice which is the reflexive voice" (Guillaume)1964 : 142), my translation).

The evolution from the directed benefactive to the observed benefactive clearly shows in the following pair of sentences:

Upodobałem sobie tę książkę.
and: *Ta książka mi się podoba*
= *I find this book pleasing (to me).*

Again here, this perfectly grammatical and congruous English sentence is seldom used. Instead:

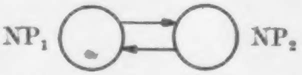
I like this book.

is preferred, possibly because of its concision.

Polish also uses:
Lubię tę książkę

but makes a distinction between this form reserved for a generality and the observed benefactive applied to a single event, an attenuated feeling, or whenever the emphasis is placed on something or somebody affecting the observer.

E.

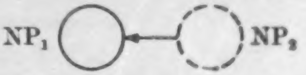


Reciprocal: The action is initiated more or less simultaneously by two or more instigators or groups of instigators each acting upon the other. All the actants are both agents and patients.

Bili się (wzajemnie)=
They fought (one another).

We have here a perfect case of symmetry.

F.



Passive: This is probably the largest set of Polish pronominal verbs. It includes most *verba affecta* (as defined in structure D) which according to some grammarians were the most decisive factor in the creation and development of the reflexive particle *się* (Szlifersztejnowa 1968 : 185).

Boję się=
I am afraid.
Chce mi się jeść=
I feel hungry.
but: *Chce mi się śpiewać=*
I feel like singing

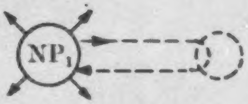
probably because English does not have any passive adjectives to insert into these semantically passive expressions. In addition, we find in this group most so-called inchoatives, which express the inception or a change in a process, especially the impersonals referring to time and weather conditions. One will notice that the circle representing NP$_2$ is in dotted line, this is because NP$_2$ is not always expressed. Whenever the instigator of the action is unknown; not clearly perceived or conceived, not observable, or unmentionable for some reason or another, the empty marker *się* is inserted into the structure thus replacing the real agent.

Ściemnia się=
It is getting dark.

In this connection, Polish posters, announcements and written signs of all types are particularly fascinating. Whenever the message is positive, a personal non-pronominal form is used as if the overt subject were proud to take on full responsibility for the contents. Whenever it is negative, its originator or creator seems to disappear and hide behind the cover particle *się* in an impersonal structure.

Polecamy nasze nowe plakaty=
We recommend our new posters.
and *Uprasza się nie zanieczyszczać pojazdu=*
You are requested (by someone) not to litter, or simply:
Don't be a litterbug.

G. *Emissive:*



In this set we find situations where NP$_1$ seems to cause or undergo a change or to perform an action more or less independently of any NP$_2$. In reality NP$_2$ is optional, its existence is unessential, not needed or already provided by the context; for that reason it remains unexpressed. The action seems to be intransitive.

Zawsze awanturuje się (z nią)=
He always $\begin{Bmatrix}\textit{makes}\\ \textit{causes}\end{Bmatrix}$ *trouble (for her)*
or *He always brawls (with her).*

For lack of a better word, I choose to call these verbs emissive (which term was suggested to me by my colleague and friend, Ela Muskat-Tabakowska) because in most cases NP$_1$'s activity seems to radiate and spread out without, however, any inchoative or iterative connotation.

In *I wake up at seven=*
Budzę się o siódmej.

To the contrary of *sleep*, which is continuative, the verb *wake up* is momentary; and yet it may be perceived as a gradual change-of-state self-generated by NP$_1$. Emissive verbs include, therefore, some of the verbs Fillmore (1971 : 373) calls change-of-state verbs but exclude others like *break* in:

He broke vases until 5 o'clock=
Rozbijal wazony do piątej.

because the change-of-state is imposed by NP$_1$ on a NP$_2$.

However, the same verb accompanied by a postposition and used without a NP$_2$ will become emissive.

He completely broke down=
Zupelnie zalamal się.

Thus, very often, emissive verbs will appear in English as two-word verbs where the postposition indicates the direction of the change (down, up or most often out as represented in our drawing).

He was crying in the wilderness=
Wydzieral się w pustyni.

In addition, it is conceivable in the example above that whoever was crying out in the wilderness hoped consciously or unconsciously that his cries would attract somebody's attention and bring him help. This eventuality is represented in our drawing through a dotted NP$_2$ and a dotted action line. Whenever the possibility becomes an occurrence, the situation (or action) changes from emissive to directed benefactive. The emphasis switches from the activity itself to the outcome of this activity.

Quite often the same Polish verbal form may be used with different meanings. For instance, *budzić się* may be conceived as a passive in:

Budzę się przy pomocy budzika=
I wake up with (the help of) an alarm clock.

or: *Budzę się z powodu hałasu=*
I wake up because of (some) noise.

where it is the instrument (the alarm-clock, the noise, etc.) that wakes me up. It may also be a reflexive whenever I decide before falling asleep I that must wake up at 6 : 00 a.m. for some important reason, or whenever I am half awake and I strive very hard to wake up in order to be able to get up:

I wake (myself) up=
Budzę $\begin{Bmatrix}\textit{się}\\ \textit{siebie}\end{Bmatrix}$ *własną wolą.*

The main difference between these spontaneous change-of-state emissive verbs and other change-of-state verbs occuring with a single NP in the deep structure seems to lie in the fact that they may have different meanings or show different emphasis when they appear with more than one NP in the deep structure; as we have seen for *budzę się, załamał się* (*I wake up, He broke down*), they emphasize the action itself, which, as a matter of fact, is involuntary. Therefore, verbs like *usypiam* (*I fall asleep*) being [−spontaneous], *wstaję* (*I rise*) being [+voluntary] do not qualify as emissive verbs in spite of all the other features they might share with these.

4. *Pedagogical Implications.*

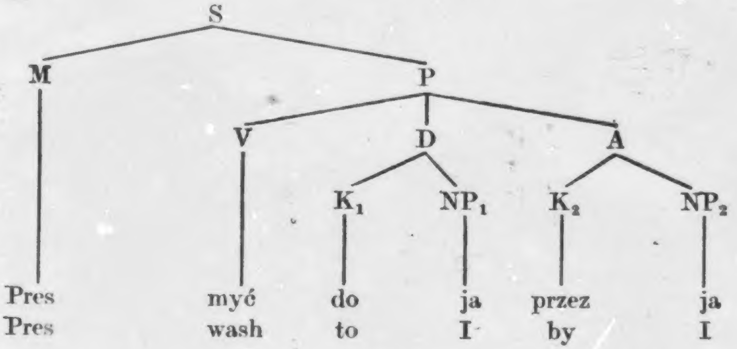
A linguistic interpretation of these representations would be most useful to reach the goal already stated under 2.5, i.e., to set up an explanatory and descriptive system which would enable the language learner to translate pseudo-reflexives from his native or source language into the target language. The fact that the semantic representations are common both to Polish and English should make it clear that each lexical formative's set of deep structure syntactic features should be the same for both languages. An adequate description of these syntactic features would provide a tool for generating acceptable sentences in either language. Fillmore's framework as expounded in "The case for case" (1968) is probably the most suitable to show correspondences between semantic representations and deep structures.

This relationship is illustrated here for each of our seven categories of pronominal verbs through sample trees and phrase structure rules down only to the level of significantly different features. The phrase structure rules are identical for Polish and English. Differences appear only in later transformational rules.

4.1. *Underlying Structures.*

These underlying structures do not represent the deepest intercomponential relationships, but rather reflect the status of such relationships after the application of certain transformations. Some of the less understandable underlying structures will be examined again in the next subdivision of this paper.

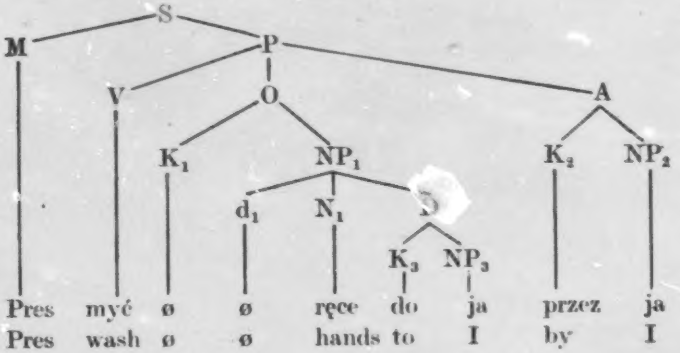
A. *Total Reflexive*: Myję się=*I wash myself.*



S → MP
P → VDA
D → K_1 NP_1
A → K_2 NP_2

$NP_1 = NP_2$
(NP_1 and NP_2
are co-referential)

B. *Part Reflexive*: Myję ręce=I wash my hands.

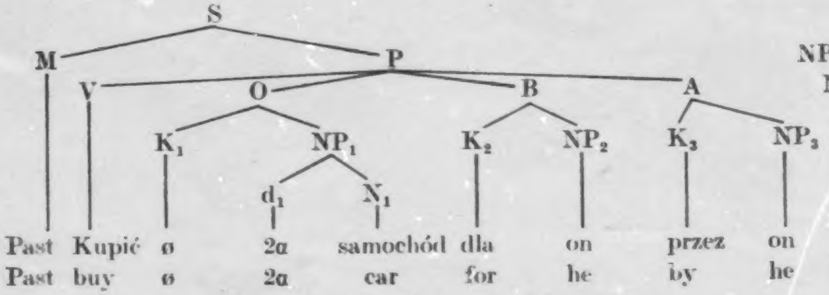

S
M
P
V
O
A
K_1
NP_1
K_2
NP_2
d_1
N_1
D
K_3
NP_3
Pres myć ø ø ręce do ja przez ja
Pres wash ø ø hands to I by I

$NP_1=NP_2+$residue

NP_2 is only a part of NP_1

$S \rightarrow MP$
$P \rightarrow VOA$
$O \rightarrow K_1NP_1$
$NP_1 \rightarrow d_1\ N_1\ D$
$D \rightarrow K_3\ NP_3$
$A \rightarrow K_2\ NP_2$

C. *Directed Benefactive*: Kupił sobie samochód=He bought himself a car.

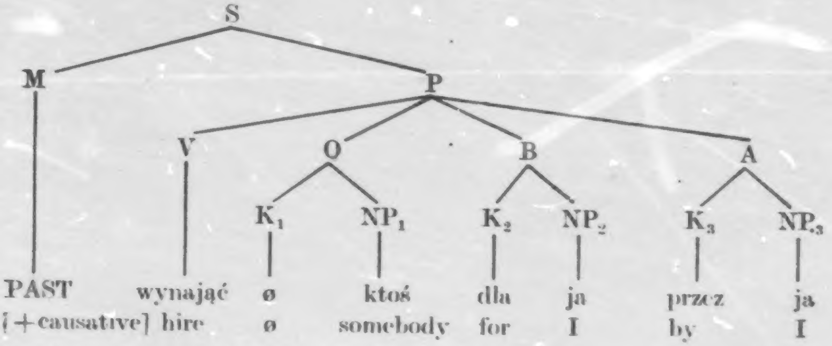

S
M
P
V
O
B
A
K_1
NP_1
K_2
NP_2
K_3
NP_3
d_1
N_1
Past Kupić ø 2α samochód dla on przez on
Past buy ø 2α car for he by he

$NP_2=NP_3$

$S \rightarrow MP$
$M \rightarrow$ past
$P \rightarrow VOBA$
$O \rightarrow K_1\ NP_1$
$B \rightarrow K_2\ NP_2$
$K_2 \rightarrow$ dla, for
$A \rightarrow K_3\ NP_3$
2α is an existential quantifier (Leech 1969: 51)

Whenever the objective case is occupied by an animate patient, it is conceived as an "ergative initiator" or "non-immediate causer" (Ikegami 1969:11). For instance, in the sentences: *Wynająłem się (do pracy)= I got myself hired* the "agentive initiator" is *Ja* or *I* who plays the most active role, although obviously it does not perform the hiring. The unspecified hirer is an ergative initiator because it is the object, or ergatum of the main causative predication:

Spowodowałem, że ktoś... (*Zmusiłem kogoś...*)
= *I caused somebody...*



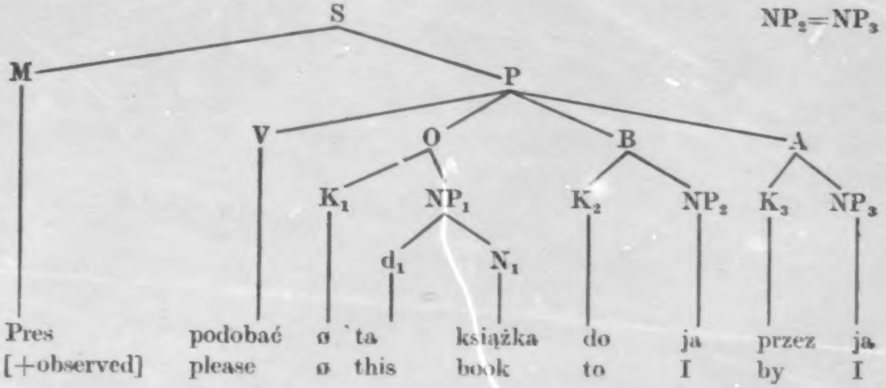
S→MP
M→past, [+Causative]
P→VOBA
O→K_1 NP_1
B→K_2 NP_2
A→K_3 NP_3
K_2→dla, for
K_3→przez, by

At the same time, the "ergatum" or "object" is the subject of the downgraded predication

.......*Ktoś wynajął mnie.*
=.......*Somebody hired me.*

and for that reason it is called "ergative *initiator*", or non-voluntary initiator. *Ja* or *I* is now a beneficiary of the action it initiated voluntarily. The result is that both Polish and English underlying structures contain coreferential Benefactive and Agent, which is reflected in the respective surface structures through a reflexive pronoun.

D. *Observed Benefactive*: Ta książka mi się podoba=I find this book pleasing (to me).



$S \rightarrow MP$
$M \rightarrow [+\text{Observed}]$
$P \rightarrow VOBA$
$O \rightarrow K_1\ NP_1$
$B \rightarrow K_2\ NP_2$
$K_2 \rightarrow$ do, to
$A \rightarrow K_3\ NP_3$

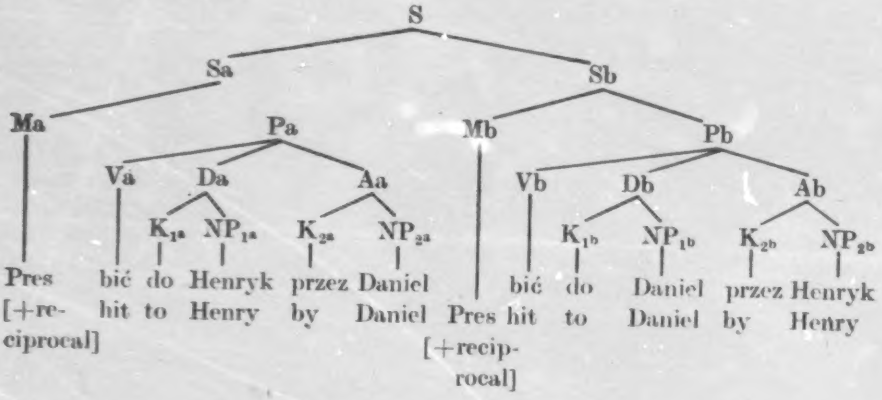
Notice that for the *Observed Benefactive* K_2, the beneficiary's case marker is *do* in Polish and *to* in English, while in the Directed Benefactive it was respectively *dla* and *for*. This difference in case marker corresponds to the difference in the direction of the action line in relation to NP_1 in the semantic representations.

For the somewhat archaic form (Doroszewski 1973:826)

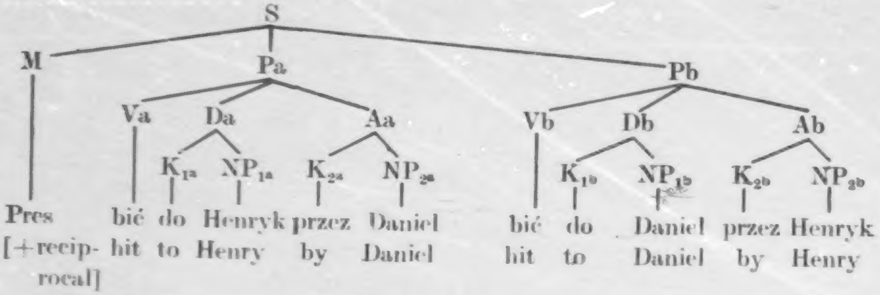
> *Upodobałem sobie tę książkę=*
> *I took a liking for this book.*

which is a *Directed Benefactive*; K_2 would be *dla* or *for*. After this basic notational distinction depending on the *Directed* versus *Observed* feature of modality has been established, we may adopt the procedure recommended in *The major syntactic structures of English* (Stockwell 1973) where a basic, unmarked preposition is assigned to each underlying case, while other prepositions, which occur in surface structures, are marked with respect to the constructions in which they occur and assigned through transformational rules.

E. *Reciprocal*: Henryk i Daniel biją się (wzajemnie)=Henry and Daniel are hitting each other.


S
Sa
Sb
Ma
Pa
Mb
Pb
Va
Da
Aa
Vb
Db
Ab
K1a
NP1a
K2a
NP2a
K1b
NP1b
K2b
NP2b
Pres [+reciprocal]
bić hit
do to
Henryk Henry
przez by
Daniel Daniel
Pres [+reciprocal]
bić hit
do to
Daniel Daniel
przez by
Henryk Henry

Sentences labeled as "reciprocal" do not represent simplex sentences, but rather a conflation of two simplex sentence showing coreferentiality between component NP's. The action being symmetrical and the modality identical in the two simplex kernel sentences, the compound sentence may be represented through the following underlying structure obtained after Node Raising and Gapping (Maling 1972 : 103 f. 4):


S
M
Pa
Pb
Va
Da
Aa
Vb
Db
Ab
K1a
NP1a
K2a
NP2a
K1b
NP1b
K2b
NP2b
Pres [+reciprocal]
bić hit
do to
Henryk Henry
przez by
Daniel Daniel
bić hit
do to
Daniel Daniel
przez by
Henryk Henry

$S \rightarrow S_a\ S_b$
$S_a \rightarrow M_a\ P_a$
$M_a \rightarrow [+\text{reciprocal}]$
$M_b \rightarrow [+\text{reciprocal}]$
$P_a \rightarrow V_a D_a A_a$
$P_b \rightarrow V_b D_b A_b$
$D_a \rightarrow K_{1a}\ NP_{1a}$
$A_a \rightarrow K_{2a}\ NP_{2a}$
$D_b \rightarrow K_{1b}\ NP_{1b}$
$A_b \rightarrow K_{2b}\ NP_{2b}$

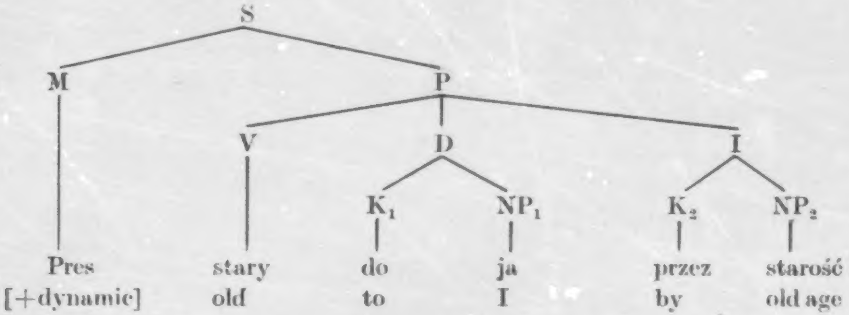
The reciprocal feature of modality states the obligatory requirement that whenever a NP is chosen out of P_a to occupy the subject position or relation with V_a, its corresponding NP in P_b be simultaneously chosen to occupy the corresponding position in P_b or relation with V_b.

Ex: D_a is chosen and so is D_b

Henryk jest bity przez Daniela + Daniel jest bity przez Henryka

= *Henry is hit by Daniel + Daniel is hit by Henry.*

F. *Passive*: Starzeję się = I am getting old.



S→MP

M→[+dynamic]

P→VDI

$D \rightarrow K_1NP_1$

$I \rightarrow K_2NP_2$

We chose old age for the instrument provoking the process of aging, but we could have chosen time, the years or some similar concept which would be both indefinite and acting upon the dative subject. Actually, it is not so essential, because the dative case of *I* will generate a passive anyway.

It will be noticed here that the preposition *przez* or *by* assigned to the "Instrumental" is the same as for "Agentive" in other underlying structures illustrated in this paper. This homonymy was already reported in 1969 by Fillmore in his now famous sentence:

The rats were killed by fire.

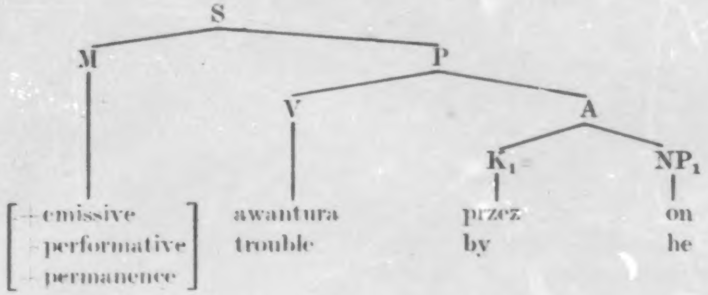
In 1970 at the LSA Summer Linguistic Institute at the Ohio State University, he explained it by the fact that

> "... Certain case relationships seemed to be more closely related to each other than to other relationships... [and a way to represent this fact]... would be to somehow decompose them into components and to show that, for example, Agent and Instrument had some kind of shared feature of 'causation', that Object and Dative shared a 'Patient' component, etc." (Starosta 1972).

An alternate preposition in Polish is *od* which we find in

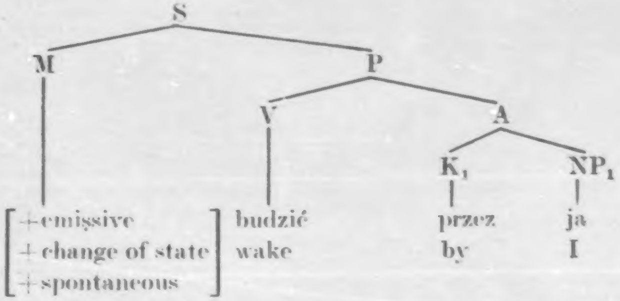
Lód porysował się od sanek.
The ice got scratched by the sleigh.

G. *Emissive*: Zawsze awanturuje się = He always $\begin{Bmatrix}\text{makes}\\ \text{causes}\end{Bmatrix}$ trouble
He always brawls.


S
M
P
V
A
K₁
NP₁
+emissive
+performative
+permanence
awantura
trouble
przez
by
on
he

S→MP
M→[+emissive, +performative, +permanence]
P→VA
A→K_1NP_1

Budzę się = I wake up.


S
M
P
V
A
K₁
NP₁
+emissive
+change of state
+spontaneous
budzić
wake
przez
by
ja
I

S→MP
M→[+emissive, +change of state, +spontaneous]
P→VA
A→K_1NP_1

4.2. *Transformations and Surface Structures.*

A. *Total Reflexive.*

Myję się = I wash (myself).

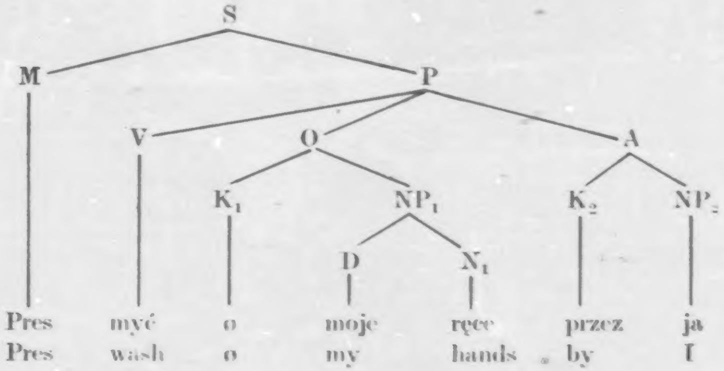
This is the simplest semantic concept and it does not need any further explanation than that already presented in sections 3.1.3.2. and 3.1.3.4. The only additional observation one might wish to make is that in Polish *się* is normally unmarked while *siebie* is marked or used after a preposition.

Patrzy na siebie w lustrze=He looks at himself in the mirror.

B. *Part Reflexive.*

Myję ręce=I wash my hands.

D. remains inside NP_1 but is preposed to N_1 and converted to the possessive form, displacing the original determiner (cf. Fillmore 1968: 68).



The Agentive is then chosen as subject and a subject preposition deletion transformation is applied, yielding

$$\mathrm{MVOA} \Rightarrow \mathrm{AMVO}$$

$$\mathrm{AMVO} \rightarrow \begin{Bmatrix} \textit{ja myć moje ręce} \\ \textit{I wash my hands} \end{Bmatrix}$$

After all agreement transformations have been applied Polish deletes the possessive determiner, probably because it is felt redundant (cf. 3.1.3.2. for similar deletions in English pseudo-reflexives).

C. *Directed Benefactive.*

Kupil sobie samochód=He bought himself a car.

The Agentive is chosen as a subject and the subject preposition is deleted:

* *on* [+past] *kupić jeden samochód dla on*
* *he* [+past] *buy a car for he*

The [+human] indirect object is extraposed into its normal place after the verb, its preposition is deleted in that position, reflexivization takes place and agreement transformations are applied:

* *on* [+past] *kupić dla on jeden samochód*
* *on* [+past] *kupić on jeden samochód*
* *on* [+past] *kupić sobie jeden samochód*

On kupił sobie samochód.

* *he* [+past] *buy for he a car*
* *he* [+past] *buy he a car*
* *he* [+past] *buy himself a car*

He bought himself a car.

Notice that both *sobie* and *himself* are unmarked; in a marked or emphatic sentence Polish would use:

On kupił samochód (*tylko*) *dla siebie.*

and English

He bought a car (*only*) *for himself.*

Directed Benefactive with two distinct animate NP's:

Wynająłem się (*do pracy*)=
I got myself hired.

The Agentive is chosen as a subject and the subject preposition is deleted:

* *ja* [+past, +causative] *wynająć ktoś dla ja.*
* *I* [+past, +causative] *hire somebody for I.*

The [+causative] feature of modality is expressed by the modal verb *to cause* in English and *spowodować* in Polish; the [+OBJECTIVE] NP, (an ergative initiator) is extraposed into its normal place after the causative verb, post-verbal prepositions are deleted and agreement transformations are applied:

* *ja* [+past] *spowodować ktoś wynająć dla ja.*
* *ja spowodowałem ktoś wynająć dla mnie.*
* *I* [+past] *cause somebody hire for I.*
* *I* [+past] *cause somebody hire for me.*
* *I caused somebody hire for me.*

Because the transitive verb *hire* or *wynająć* has no other object and because emphasis in the action is placed on its benefactive component, the latter assumes the closest or neutral non-subject relationship with the verb and the ergative initiator (or objective) is deleted:

* *ja spowodowałem ktoś wynająć mnie.*
* *ja spowodowałem wynająć mnie.*
* *I caused somebody hire me.*
* *I caused hire me.*
* *I caused me hire.*

The result component of the benefactive is emphasized in Polish through synthetization of the two parts of the verb, in English through the use of the passive with the resulting copula:

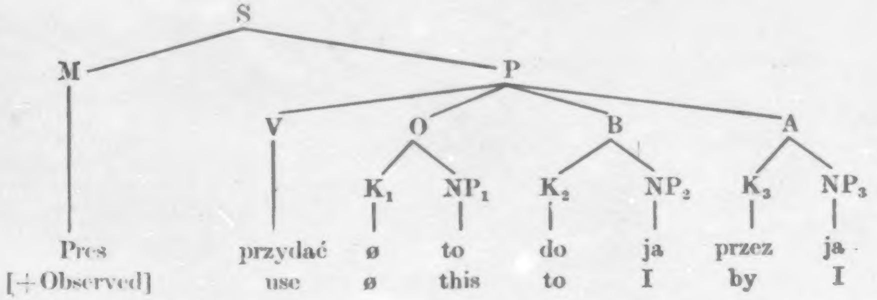
* *ja wynająłem mnie.*
* *I got me hired.*

Reflexivization takes place in both languages.

* *ja wynająłem się.*
Wynająłem się.
or *Ja się wynająłem.*
I got myself hired.

It is interesting to note that this sentence is quite different in meaning from *I got hired* or *I was hired* because it has an active component which the other two lack.

D. *Observed Benefactive.*
To mi się przydaje = I find this useful (to me).



For Polish the modality feature [+observed] will determine the choice of Objective to perform the function of subject.

* *to przydać do ja przez ja*

Reflexivization takes place:

* *to przydać do ja się*

Agreement transformations are applied and Polish word order introduced:

* *to się przydać do mnie*
* *to się przydaje do mnie*
To mi się przydaje.

For English, the modality feature [+observed] acts directly on the verb which acquires an observable quality and becomes a kind of verbal adjective.

* [+observed] *useful this to I by I*

Normal choice for the subject position remains the agentive which is still able to observe the situation.

* *I* [+observed] *useful this to I*

Agreement transformation is applied:

* *I* [+observed] *useful this to me*

Word order transformation:

* *I* [+observed] *this useful to me.*

On this level, various choices exist between embedding transformations or without embedding with a verb like *find*:

I observe that this is useful to me.
I find that this is useful to me.
I find this useful to me.

At last optional deletion transformation may be applied to *to me*:

I find this useful.

Another alternate form exists in English,

I find (some) use for this.

but it is not of direct interest to us at this time, although it is probably an additional support for our feature of [+observed benefactive].

E. *Reciprocal.*

Henryk i Daniel biją się (wzajemnie)=
Henry and Daniel are hitting each other.

This concept does not seem to present any special difficulty. It is already adequately treated in most grammar books and language handbooks. The only additional observation I would like to make here is that *się* is not substitutable by *siebie* in an unmarked position, (contrarily to total reflexive) and that *siebie* is used after prepositions (like in total reflexive).

Based on our representation of the deep structure of reciprocals, if we choose C_1 to occupy the subject position in English we'll have:

Henry is being hit by Daniel.
and *Henry is hitting Daniel*

In Polish with C_1 performing the subject function we'll have:

Henryk jest bity przez Daniela
and *Henryk bije Daniela*

F. *Passive:*

Starzeję się=I am getting old.

The Dative is chosen to occupy the subject position in English and its preposition is deleted:

* *I* [+dynamic] *old by old age.*

The modality feature [+dynamic] which here implies [+continuous] will generate:

I am becoming old (*by old age* is deleted because it is superfluous, as stated in 4.1.F.).
or *I am getting old.*

In Polish the Dative also chosen to perform the subject function:

* *Ja* [+dynamic] *stary przez starość.*

The modality feature [+dynamic] will generate:

* *Ja staję stary przez starość.*

Reflexivization transformation is applied:

* *Ja staję stary się.*

Word order:

Ja się staję stary.

Synthetization transformation:

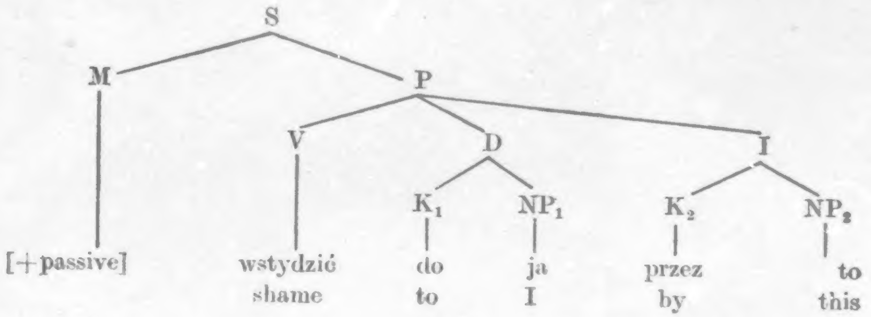
Ja się starzeję or *Starzeję się.*

Some inchoatives do not use the reflexive pronoun. They are those for which the Instrumental is not coreferential with the attribute of the Dative.

Kwiaty czerwienieją (od słońca).
Flowers are getting red (from the sun) or *Flowers are reddened by the sun.*

Note that inchoatives are not all passives. As a matter of fact, most of our categories may be made inchoative, as it is possible to conceive of most actions or states in their developing process. On the other hand, many verbs are passive without being inchoative. An example of this may be:

Wstydzę się=I am ashamed.



The Dative is chosen for the subject:

* *Ja* [+passive] *wstydzić przez to.*
* *I* [+passive] *shame by this.*

In English the usual passive voice is used:

I am ashamed by this.

or with an old passive prefixation:

I am ashamed (of this).

In Polish the modality feature [+passive] introduces the marker ***się*** whenever, for some psycho-sociological reasons, it is preferable not to express the Agentive present in the deep structure, or whenever there is no Agentive at all (cf. 3.4.2.F.).

* *Ja wstydzić się (przez to).*

After agreement transformation and word order:

Ja się wstydzę or *Wstydzę się.*

It is of some interest to note that the surface forms with the reflexive in Polish correspond to underlying VERB$_{adj}$ — OBJECT or VERB$_{adj}$ — DATIVE relationship independently from the [±dynamic] feature of modality, which observation confirms Fillmore's and Starosta's suggestions (1972).

Starzeję się [+Dative, +Dynamic]
=*I am getting old.*
Ściemnia się [+Objective, +Dynamic]
=*It is getting dark.*
Wstydzę się. [+Dative, +Static]
=*I am ashamed.*
To się rozumie
=*It is understood* [+Objective, +Static]

This has probably contributed to the belief that the reflexive pronoun in the Polish passive surface structure merely indicates that through transformations either the Dative or the Objective has become the subject of the surfacestructure. While this is generally true with verbs of the type *bić* "beat", *nieść* "carry", *widzieć* "see", *gotować* "cook" which allow the distinction between action-author and action-bearer (Polański 1972: 3 sq):

ex: *Ziemniaki się gotują*
=*The potatoes are cooking.*

It does not explain the absence of *się* in sentences like

Kwiaty czerwienieją (*od słońca*).
=*Flowers are getting red* (*from the sun*).

due to the lack of coreferentiality between an underlying Agent or Instrument and Dative or Object. Nor does it explain the presence of *się* in intransitive verbs of the type discussed in the following category.

G. *Emissive.*

As already mentioned in 3.4.2. G, we find under this category:

1. *Spontaneous change-of-state verbs* like *wake up* or *budzić się* which are neither passive, nor reflexive because they contain only one NP in the deep structure.

* [+emissive, +change of state, +spontaneous] *budzić przez ja*
* [+emissive, +change of state, +spontaneous] *wake by I*

Because the modality features indicate a self generated action, so to speak, an action by itself for itself, the subject is not extraposed but copied.

* *ja* [+emissive, +change of state, +spontaneous] *budzić przez ja*
* I [+emissive, +change of state, +spontaneous] *wake by I*

Reflexivization:

**ja* [+emissive, +change of state, +spontaneous] *budzić się przez*
* *I* [+emissive, +change of state, +spontaneous] *wake by myself*

In Polish, a descriptive language, the modality features are abandoned:

**ja budzić przez się*

In English, an action language, the same dynamic modality features are expressed through the directional preposition *up*:

I wake up by myself.

In Polish, Object preposition deletion:

**ja budzić się*

Morphosyntactic agreements:

Budzę się.

In English, Deemphasizing or Neutralization through Deletion of Reflexive:

I wake up.

2. *Achievement emissive verbs.*

Just like the spontaneous change-of-state emissive verbs, these verbs are accompanied by only one NP in the deep structure and for that reason classified together with them. They also emphasize the action itself viewed, however, as an activity, movement, or operation produced or emitted by the single NP, an Agentive. Because the outcome of the action is not directly considered, they are called achievement verbs (Fillmore 1971: 374). In Polish *się* is used to underline the self-contained characteristics of the action. In English, we generally have a two-cluster predication; the final terminal cluster normally occupied by an object is missing or expressed through a null symbol. Quite often, the helping verbs *cause* or *make* may be used, underlining the idea of performance or achievement; *dorozumieć się* (make a guess), *nastawić się* (make a stand), *odzywać się* (answer) belong to this group.

Awanturuje się=He makes trouble

* [+emissive, +performative] *awantura przez on*
* [+emissive, +performative] *trouble by he*

Subject copying:

* *on* [+emissive, +performative] *awantura przez on*
* *he* [+emissive, +performative] *trouble by he*

1.0
4.5
5.0
5.6
6.3
7.1
8.0
9.0
2.8
3.2
3.6
4.0
2.5
2.2
2.0
1.8
1.1
1.25
1.4
1.6

MICROCOPY RESOLUTION TEST CHART
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Reflexivization:

* *on* [+emissive, +performative) *awantura przez się*
* *he* [+emissive, +performative] *trouble by himself*

Verbalization

* *on robi awantura przez się*
he makes trouble by himself

In Polish we have two options, either synthesizing **on awanturować przez się*, or copying the analytical verbal expression:

* *on robi awantura*

Agreements (after object preposition deletion)

* *on awanturować się*
Awanturować się.

or: *Robi awanturę.*

In English, we have deemphasizing or neutralization through reflexive deletion:

He makes trouble.

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ON THE SEMANTICS OF SOME ENGLISH AND POLISH VERBS

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0. Much of the more recent work in linguistics has been devoted to the semantics of verbs and predicate complement constructions. The result has been a different classification of verbs on the basis of their semantic properties. To what extent the semantic classes overlap with the syntactic classification still remains to be seen. Such parallels might be of great interest in contrastive analysis.

0.1. The term 'presupposition' has become almost indispensable for the analysis of complement sentences. Linguists tend to avoid a logical definition of presupposition in terms of truth values. Some linguists use the term to refer to a feature of sentences[1]. Others use it to refer to an act or property of speakers[2].

At the moment, linguists agree upon the incorporation of context, as a set of logical forms that constitute the set of background assumptions, into the definition of presupposition: "A presupposes B relative to $X \underset{\mathrm{def}}{=}$ it is not acceptable to utter A in the context of X unless X entails B" (Karttunen 1973b:11).

0.1.2. This paper will deal more with problems of entailment than with presupposition itself. The basic assumption is that the set of implications derivable from a sentence by general rules of inference should be distinguished from the semantic representation of the sentence, which consists of a proposition and presuppositions (Karttunen 1970a: 337). In other words, Karttunen proposes some meaning postulates for the derivation of implied sentences which are not included in the underlying representation of their antecedents.

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[1] Karttunen (1973:169): "Sentences are presupposed by sentences only, not by people".

[2] Stalnaker (1973): "It is persons rather than sentences, propositions, or speech acts that have or make presuppositions".

Based on the above assumptions will be an attempt to compare the classes of implicative verbs, distinguished so far, in English and Polish. Such analysis may prove helpful for the solution of many problems connected with predicate complementation in the two languages.

1. Implicative verbs are similar to factives: in affirmative assertions they commit the speaker to the belief that the complement sentence is also true:

1) It is odd that Bill is alone — factive
2) John managed to kiss Mary — implicative

However, negating factive predicates does not affect the assumed truth of their complements, whereas the negation of an implicative predicate falsifies its complement:

1′) It isn't odd that Bill is alone : Bill is alone
2′) John didn't manage to kiss Mary : John didn't kiss Mary

Karttunen proposes that different implicative verbs be accounted for in terms of some necessary and/or sufficient conditions on whose fulfillment the truth of the complement sentence depends. Thus, two-way implicative verbs, such as *happen, bother, manage, remember,* presuppose some necessary and sufficient condition for the truth of their complements:

$v(S) \supset S$ 'v(S) is a sufficient condition for S'
$\sim v(S) > \sim S$ 'v(S) is a necessary condition for S'

3) Yesterday, John didn't $\left\{\begin{array}{l}\text{happen}\\ \text{manage}\\ \text{bother}\\ \text{remember}\end{array}\right\}$ to kiss Mary.

implies that some decisive condition was not fulfilled and hence:

$\supset$ Yesterday, John didn't kiss Mary.

The distinction implicative/non-implicative shows also in Polish, and most probably in a great number of languages, especially those typologically similar. Using a comparison of Finnish and English Karttunen concludes that the inventory of implicative verbs is more language-specific than that of non-implicative verbs.

With the Polish equivalents of the above English implicatives a similar behaviour can be noticed:

4) Wczoraj Jan nie zdołał pocałować Marii

$\left\{\begin{array}{l}\text{nie pokwapił się}\\ \text{nie pamiętał}\end{array}\right\}$, żeby pocałować Marię

$\supset$ Wczoraj Jan nie pocałował Marii.

1.1. It seems interesting that English and Polish implicatives should behave almost identically as far as the choice of a complement sentence is concerned. When we assume the following coursory equivalence in complement structures between English and Polish:

POSS-ing=NOM, ŻE-S, ŻEBY-S
FOR-TO=INF, ŻEBY-INF, ŻEBY-S
THAT-S=ŻE-S, ŻEBY-S

we can notice many similarities in a verb's choice of a complement. For example all tested English implicative verbs take infinitival complements, and so do their Polish equivalents, either in the form of an infinitive or ŻEBY+infinitive:

5) Pamiętałem, żeby zamknąć drzwi = I remembered to lock the door
6) Udało mu się otworzyć drzwi = He managed to open the door.

The implications carried out by the complement sentences seem to depend on the type of the complement:

7) I remember that I locked the door = Pamiętam, że zamknąłem drzwi imply

7′) I locked the door and Zamknąłem drzwi.
8) I remember telling him implies I told him.

In the negative, however, the implication is not so immediate:

8′) I didn't remember telling him = Nie pamiętałem, żebym mu to mówił.

1.1.1. It might be worth testing whether *that*-complements and *ing*-complements, as opposed to *to*-complements, can have the same semantic representation, since the former two seem to involve similar implications. It may be the fact, then, that the expected implications and presuppositions of some verbs are not carried out in all syntactic environment. Karttunen (1971b:60), for example, observed that in the indicative mood there is no difference between *that*-complements and *poss-ing* complements of factive verbs. In the subjunctive, however, *that*-complements require truth in the actual world, *poss-ing* complements may suggest some fictitiousness. Also *for-to* complements may be interpreted as fictitious whenever the main sentence is in the subjunctive mood.

1.1.2. Non-implicative verbs, by definition, do not carry any implication with their complements:

9) John hoped to solve the problem {and he did.
{but he didn't.

Jan miał nadzieję rozwiązać ten problem, {ale mu się nie udało.
{i rozwiązał go.

10) John decided to leave England, but I don't know whether he did.
Jan zdecydował się wyjechać z Anglii, ale nie wiem, czy wyjechał.

1.2. There are verbs whose implications are reverse, i.e., their affirmative assertion implies the negation of the complement, and a negative assertion carries a positive implication.

11) I forgot to lock the door = Zapomniałem zamknąć drzwi
⊃I didn't lock the door = Nie zamknąłem drzwi.
11') I didn't forget to lock the door = Nie zapomniałem zamknąć drzwi
⊃I locked the door = Zamknąłem drzwi.

Quite a number of those verbs in English do not have their equivalents in seperate Polish verbs. English utterances with such negative-implicatives are often conveyed in Polish by means of their complements, that is by their implications:

12) I fail to understand = Nie rozumiem.
13) He neglected to write to his mother = Nie napisał do matki.

Maybe this observation, properly validated, could be another argument in the discussion whether such 'negative' verbs should be accounted for by means of a separate pair of meaning postulates:

$$v(S) \supset \sim S$$
$$\sim v(S) \supset S$$

or whether they should be treated as negated 'positive' verbs in their underlying syntactic structure. This problem will recur with other groups of implicatives.

2. Some verbs are two-way implicative and some other predicates give rise to implicative relations such that the implication holds only in either a negative sentence or an affirmative one; there is an asymmetry between their negative and affirmative assertions.

2.1. Verbs, called by Karttunen *if*-verbs because they express a sufficient condition for the truth of the complement, are noncommittal with respect to the complement sentence in negative assertions. They yield the implication in an affirmative assertion:

14) John $\left\{\begin{array}{l}\text{forced}\\ \text{made}\\ \text{persuaded}\end{array}\right\}$ Mary (to) stay home
⊃ Mary stayed home.
15) Jan $\left\{\begin{array}{l}\text{zmusił Marię}\\ \text{skłonił Marię}\\ \text{wyperswadował Marii}\end{array}\right\}$, żeby została w domu
⊃ Maria została w domu.

The negative *if*-verbs imply the complement to be false in affirmative assertions:

16) John prevented Mary from leaving
⊃ Mary didn't leave.
17) Jan zapobiegł wyjazdowi Marii
⊃ Maria nie wyjechała.

whereas a negative assertion is noncommittal. Here again the problem appears of how such negative verbs should be accounted for. In his discussion of *persuade—dissuade* G. Lakoff (1971:247) suggests that *dissuade* be introduced from a structure containing the lexical item *persuade*, i.e., *persuade-NP-not*, not by a rule of lexical insertion. In Polish, however, the verb *wyperswadować* carries both positive and negative implications:

18) Wyperswadował jej, żeby została w domu
⊃ Została w domu.
He persuaded her to stay home.
19) Wyperswadował jej pozostanie w domu
⊃ Nie została w domu
⊃ He dissuaded her from staying home.
He dissuaded her from staying home.

The intuitions of Polish speakers are such that *wyperswadować* means more immediately *perswadować -not-S*.

2.2. Another group of one-way implicatives contains verbs that are noncommittal with respect to the complement in an affirmative assertion and imply the falsity of the complement in a negative assertion. These verbs may be accounted for by the meaning postulate $\sim v(S) \supset \sim S$ where '$v(S)$ is a necessary condition for S':

20) John did not have the opportunity to leave England
⊃ John did not leave the country
21) Jan nie miał okazji wyjechać z Anglii
⊃ Jan nie wyjechał z Anglii.

These are called the *only-if* verbs.

The only known so far English negative *only-if* verb *hesitate* yields a positive implication in a negative assertion and is noncommittal in affirmative sentence:

22) Bill did not hesitate to call him a liar
$\supset$Bill called him a liar.

Its Polish equivalent *wahać się* seems to behave similarly:

23) Nie zawahał się nazwać go kłamcą
$\supset$Nazwał go kłamcą.

3. When dealing with the one-way implicative verbs, we come across the phenomenon of 'invited inferences' (or conversational implicatures), i.e., any assertion of the form $S_1 \supset S_2$ suggests that $\sim S_1 \supset \sim S_2$ is also true. One might expect that different languages would employ different surface devices in order to avoid invited inferences, context being a fairly universal means of disambiguation. Of two languages compared, if one developed better a certain grammatical category, it might employ this category to avoid conversational implicatures to a larger extent than the other language in which this category is deficient. This hypothesis will be tested on the category of aspect in English and Polish. We would like to find out whether the surface aspectual features of Polish verbs help to avoid invited inferences in contrast to English verbs, unmarked for aspect. The result of such a comparison will be presented in another paper.

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FORMAL CHARACTERISTICS OF THE MODAL AUXILIARIES IN ENGLISH AND POLISH

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The present paper falls into 3 parts, of which the first two (A and B) are concerned with the strictly formal, i.e., morphological and syntactic (distributional) features of the English and Polish modal auxiliaries, and the third one contains conclusions drawn from the contrasting of the two systems under discussion.

Part A: The English modal auxiliaries

The English modal auxiliaries exhibit the following set of formal features:

1. they have only finite forms;
2. they undergo Subject-Auxiliary Inversion;
3. they undergo Negative Placement;
4. they do not undergo Number Agreement;
5. they invariably occupy the initial position in the VP;
6. they do not combine internally (there are varieties, however, in which combinations of two modals in the same verb phrase are not anomalous, e.g. in Scots).
7. they lack the category of Imperative (unlike some of the other, semantically modal, verbs).

Features 1 to 7 are displayed by the following items: *shall*, *should*, *will*, *would*, *can*, *could*, *may*, *might*, *should/ought to*, *must*, *dare*, *need*, and *be to*.

Although, diachronically speaking, *should* as an equivalent of *ought to* is the past tense form of the 'compulsive' *shall* (Palmer's 'promise' use of *shall*, 1965:113), for reasons of both semantic and syntactic nature it should be treated as a modal in its own right (note that unlike *shall*, *should* marks obligation, and its distribution is not restricted to the second and third persons only). This will account for why our list of the modal auxiliaries contains not one but two occurrences of *should*, one being a variant of *would* (the past tense form of the *will* of futurity), and the other of *ought to*.

Since *dare* and *need* share the distributional criteria of both full verbs as well as modal auxiliaries, some writers prefer to treat them separately from the other items on the above list. In Barbara Strang (1965:138) *dare* and *need* along with a number of other forms are referred to by the term 'marginal items'. Other labels for these items are also available in the relevant literature (e.g. pseudo- or quasi-modals). In Palmer (1965:37) *dare* and *need* are discussed under 'Problematic Forms'.

The use of *dare* and *need* as modals is limited to non-assertive contexts. 'Non-assertive contexts' refers not only to sentences that are overtly negative and/or interrogative but also to sentences involving so-called indirect negation. Here are some examples of sentences with indirect negation:

1. He need do it only under these circumstances.
2. He need have no fear.
3. Only the very brave dare go near the pressroom.

In view of their formal behaviour, *dare* and *need* seem to be best treated as belonging in both classes, i.e., modal auxiliaries and full verbs, without any corresponding difference in their meaning.

It may be pointed out that the use of *dare* and *need* as modal auxiliaries is relatively rare in British English, but it seems even more restricted in American English (Quirk et al. 1972:83). In this connection Ehrman (1966: 73) makes the following remark: "*Dare* and *need* are used so strikingly infrequently that for the purposes of this analysis they are said to be no longer in use as modal auxiliaries. Rather they are nearly full members of the set of catenative verbs, many of which have meanings very close to or at least somewhat related to those of the modal auxiliaries".

With *used to* (included by some writers among modal auxiliaries) there are dialectal differences, some speakers use it as a modal, others not. In Palmer (1965:39) it appears as a 'doubtful member' of the class of auxiliary verbs, and is not considered a modal auxiliary. In Twaddell (1965:22) *used to* belongs to the class of catenatives which includes, among others, constructions like *get+Ven*, *get+Ving*, *keep+on+Ving*, etc.

Most writers on English grammar do not classify *be to* as a modal auxiliary. In Twaddell (1965), for example, the item in question is put into the category of catenatives. In some other accounts *be to* is assigned the status of a 'quasi-modal auxiliary' (Hakutani and Hargis 1972:314). It seems, however, that there are good reasons for regarding *be to* as a modal auxiliary in examples like:

4. They are to come.
5. He is not to do that.
6. He was to have come today.
7. Am I to understand that you are not coming?

However, in:

8. Worse is to come

be to is not a modal since it does not have to appear initially in the VP. Consider, e.g.

9. *Worse may be to come.*

Be to in 4 to 7 in almost all respects behaves like the modals listed on page 2. Thus a. it has no non-finite forms (there is no *to be to, being,* etc.); b. it does not collocate with the other modals; c. it undergoes Subject-Auxiliary Inversion; d. it undergoes Negative Placement; e. it always occupies the initial position in the VP; and finally f. it lacks the category of Imperative. In one respect, though, *be to* is different from the other modals, viz. it has the finite forms: *is, are, am, was,* and *were.* But, as Palmer (1965:143) quite rightly says, "In spite of this it is best treated as a modal, otherwise it can only be a very defective verb". The same position regarding *be to* is taken by Huddleston, (1971:295) who likewise includes this item into the category of modal auxiliaries. It may be also pointed out that, like some of the other modals, *be to* does not take the Progressive and Perfect Aspects, which explains the unacceptability of:

10. *He is being to go
11. *He has been to go

Twaddell (1965:10) wishes to account for the fact that the modal auxiliaries do not combine internally (feature 6) solely in terms of the elements of incompatibility in their meanings. As will be presently shown, this may well be true of some of the modals, or more precisely, of certain of their uses. The non-deviant character of the following examples shows that conceptions like, say, necessity, possibility, willingness, etc., are not necessarily mutually exclusive:

12. They may have to come here again tomorrow.
(where *may* signals possibility and *have to* necessity)
13. He may let you drive his car.
(where *may* signals possibility and *let* permission)
14. Such a man must be able to speak at least two languages.
(where *must* signals necessity and *be able to* ability)

The strangeness of 15. *You have to be willing to accept it* would, however, indicate that certain modalities at least are mutually exclusive (we ignore here specialized contexts which might justify sentences like 15). The combination of obligation and willingness seems untenable on psychological grounds.

It may also be pointed out that the ordering relations between various types of modality are not altogether arbitrary. Thus, while it is perfectly normal to say 16. *He has to be able to think*, 17. *He is able to have to think* where the order of the two modalities is reversed, is, at least to me, semantically anomalous.

The foregoing considerations point to the fact that the limitation imposed upon the co-occurrence of the English modal auxiliaries cannot be adequately handled without taking into consideration two types of criteria, semantic and formal. Note that Twaddell's treatment of the problem at hand would imply that this particular feature of the modals is not restricted to English only (and perhaps to a few other languages), but that it also extends across all other languages. It happens so that with regard to this type of constraint Polish is similar to English. But no such constraint is placed on the modals in a language like German, which is exemplified in:

18. Das solten Sie beweisen können.
(You should be able to prove that)

where two modal auxiliaries, *solten* and *können*, occur in the same simplex sentence. Dutch appears to allow even more than two modals to occur together, as is the case in:

19. Hij zou eigenlijk hebben moeten kunnen doen.
(He should have in fact been able to do it)

It is obvious that responsible for the impossibility of 20. *He must can speak at least two foreign languages* are not matters of semantic but of purely syntactic nature. The English modal auxiliaries simply do not have non-finite forms. On the other hand, the ungrammaticality of 21. *He must may have come* (where, we assume, *must* is used with the meaning 'conclusion' or 'strong probability' and *may* denotes 'uncertainty possibility' or 'weak probability') has to do with factors both of semantic and formal nature.

It follows from the above then that Twaddell's proposal concerning the non-combinability of the modals works only for some of them, or rather for some of their uses.

Occasionally, the claim is made to the effect that the English modal auxiliaries are lacking in selectional restrictions related to the choices of subject and object. This may well apply to cases like:

22. John might frighten sincerity.
23. Hopes will eat sandwiches.

where the value of *might* is 'possibility' and that of *will* 'future time'. Here the restrictions are on the main verb in its relationship to the subject and object, and not on the modal bit. But, note, that things are essentially different in:

24. He must (obligation) be seriously ill.
25. He may (permission) be tall.

where *must* and *may* are assumed to denote respectively obligation and permission. The modals in the senses suggested for them in 24 and 25 call for human or at least animate subjects. Notice also that the semantics of the modals as they are used in these particular examples is incongruent with stative verbs (or verbs referring to humanly uncontrollable actions). This proves that their use involves restrictions on both subject and main verb.

The fact that in 22 and 23, but not in 24 and 25, the modals are free of selectional restrictions should be explained by the meanings with which they are employed in these particular examples. The meanings conveyed by the modals in 22 and 23 are of a different type from those implied by the modals in 24 and 25. In Halliday (1970:333) the former meanings are referred to as 'modalities', while the latter are called 'modulations'. The modalities are outside the propositional part of the clause. By their very nature they are not subject to variations of tense, voice, etc., but they are free to combine "with all the values of these variables in the clause" (Halliday 1970: 333). Modulations, in opposition to modalities, constitute a part of the proposition and they have their own complete set of tenses and are subject to voice and polarity. No wonder, then, that, being outside the proposition, the modalities play no role in selection restriction.

To conclude this section of the paper, we would like to draw the reader's attention to the inadequacy of the generally accepted rule expanding the Auxiliary constituent (Chomsky 1957:111 and 1965:106):

$$\text{AUX} \rightarrow \text{Tense (M) (have+en) (be+ing)}$$

What this rule in effect says is that irrespective of their specific meaning the modals are free to combine with either the Perfect or the Progressive Aspect, or with both simultaneously. The fact is, however, that the above rule for the Auxiliary holds good for the epistemic modals only (which are concerned with the various degrees of probability). To handle this particular fact about the modal auxiliaries, we would need some such rule as:

$$\text{AUX} \rightarrow \text{Tense} \left(\begin{Bmatrix} M_1 \text{ (have+en) (be+ing)} \\ M_2 \end{Bmatrix} \right)$$

where M_1 stands for the epistemics and M_2 for the roots.

Part B: The Polish modal auxiliaries

By the criteria adopted here for English, none of the Polish verbs fully qualifies as a modal auxiliary. The Polish verbs *móc*, *musieć*, and *mieć*, generally treated as modal auxiliaries, are only in two respects similar to the English modals, viz. they take the infinitive and they do not co-occur. In many other respects they are different. Thus:

a) they are inflected for person, number, and tense, e.g., ***Musisz iść*** (2nd person, sing. number, present tense), ***Musieli iść*** (3rd person, plural number, past t.);

b) they possess non-finite forms (e.g. *musieć*, *mogący*, etc.);

c) they may occur non-initially in the VP, as in *Będę mógł to* zrobić (I'll be able to do it), where the active past participle *mógł* follows the future tense auxiliary *będę*;

d) in questions they need not necessarily precede the subject NP.
The following are basically equivalent sentences:
Czy on musi to robić akurat teraz?
Where the subject *on* (he) precedes the modal *musi*, and
Czy musi on to robić akurat teraz?
in which *on* follows the modal.

Polish appears to allow for ellipsis of subject except for cases where subject appears either in the form of a noun or relative pronoun. In, for example, *Czy Tomek musi tam iść* the NP *Tomek* cannot be deleted since it would be irrecoverable.

Features (a) to (d) are by no means characteristic of the modals only. In fact, they are shared by nearly all full verbs. The following are, however, features strictly pertaining to the modals:

a) the modals are always complemented by the main verb in the infinitive (they connote only one participant and an action with respect to which the participant functions as its ontological subject. Other participants that may occur in the underlying structure of sentences containing a modal auxiliary are connoted not by the modal itself but by the main verb with which it combines), which helps to keep them apart from other, semantically modal verbs like, for example, *lubić*, *woleć*, etc., which may be followed either by the infinitive (*Chcę pić*) or by a nominal phrase (*Chcę mleka*). There exist in Polish a handful of verbs which, like the modals, are also complemented by the infinitive, but this remains their lexical property; in contrast to the modals, they do not form a class (cf. Grzegorczykowa 1967:131).

b) a combination of two or more modals in the same VP is not allowable, (constructions of the type *musi móc* belong to specialized or to out-of-the-ordinary contexts);

c) they lack the category of Imperative (the semantically modal verbs *kazać* and *pozwolić* may be used in the Imperative).

It is interesting to note that although *pozwolić* and *kazać* are, semantically speaking, transitive verbs (two-place or two-argument verbs), they do not participate in the Passive, which explains the impossibility of:

1. *On był kazany przyjść później (He was told to come later).
2. *Ona była pozwolona zobaczyć się z mężem (She was allowed to see her husband).

However, being possessed of past participal forms, they are allowed to occur in 'impersonal' sentences (with unspecified initiator of the modality):

3. Kazano im przyjść jutro (They were told to come tomorrow).
4. Pozwolono jej odejść (She was allowed to leave).

The modal auxiliaries are both semantically as well as grammatically intransitive verbs (this also applies to the English modals). Since they have no past participal forms, they could not in any case be passivized or appear in indefinite subject (or impersonal) constructions.

In Part A of this paper it has been indicated that a satisfactory explanation of the internal non-combinability of the English modal auxiliaries must be based on criteria both of semantic as well as formal nature. It has been shown that although certain combinations of the modals would be plausible on semantic grounds, they would be impossible structurally simply because the modals have no infinitival forms.

The same type of limitation holds for Polish. But, of course, since Polish modal auxiliaries have infinitival forms, this phenomenon must be accounted for on a different basis. Decisive here seem to be factors having to do with euphony. Sentences like, for example, the following sound strange to the Polish native speaker:

5. Jan zmusił Tomka do pojechania kupienia żonie pończoch. (John forced Tom to go and buy a pair of stockings for his wife)
6. Jan zamierzał pojechać kupić ten dom.
(John intended to go and buy that house)

In 5 we have two gerunds (*pojechania kupienia*) and in 6 two infinitives (*pojechać kupić*) immediately following one another. Less unpleasant to the Polish ear would seem to be the following paraphrases of 5 and 6:

5a. Jan zmusił Tomka, aby pojechał kupić żonie pończochy.
6a. Jan zamierzał pojechać w celu kupna tego domu.

At this point we would like to discuss briefly the status of *powinien* in the verbal system of Polish. Some writers classify *powinien* as an adjective, but it is quite evident that in this position they have been guided by purely historical considerations.

Jodłowski (1971:83 ff.), for example, analyzes the item in question along with forms like *wolno*, *warto*, *trzeba*, and a few others. He points out that on account of their semantics and syntactic functions as predicates they deserve to be treated as verbs. He chose to refer to these forms by the term 'uninflected nonfinite verbs' (czasowniki niefleksyjne nieosobowe). But, this label is not quite fortunate, since, appropriate as it may be for *warto*, *trzeba*, etc., it certainly is not suitable for *powinien* which, in contrast to the other forms, is not devoid of inflection. Consider the examples:

7. Nie powinieneś się z nim zadawać (You shouldn't associate with him).
8. Powinna wkrótce przyjść (She should come any minute now).
9. Powinniśmy ją zaprosić na obiad (We should invite her to lunch).

7 to 9 show that *powinien* is both inflected and finite, and therefore it ought to be treated separately from the other members of Jodłowski's uninflected non-finite verb category. *Powinien* seems best to be treated as one of the modal auxiliaries since, like them, it:

a) has the ability to enter VP's;
b) is followed by the infinitive;
c) does not combine with the other members of the modal auxiliary class.

As a modal auxiliary *powinien* is also treated in the accounts (using formal criteria) provided by Krzeszowski (1966), Grzegorczykowa, (1967), and other Polish linguists.

Thus our modal auxiliary class includes the following items: *musieć*, *mieć*, *móc*, and *powinien*.

A few words would be in order about the collocability of the modal auxiliaries with the other members of the AUXILIARY constituent.

In the following example BYĆ (to be) is the future tense auxiliary and it happens to be the only verbal element that can precede a modal auxiliary:

10. Będzie mógł robić, co zechce (He'll be able to do what he likes).

There are sufficient reasons for making a distinction between BYĆ in 10 (from now on AUX$_1$) and BYĆ (AUX$_2$) used in:

11. On musi być ukarany (He must be punished).

AUX$_2$ is the passive voice auxiliary. In opposition to AUX$_1$, which has no present and past tense forms, AUX$_2$ has all finite forms in all three tenses distinguished for Polish, i.e., present, past, and future.

AUX$_1$ and AUX$_2$ together with BYWAĆ (AUX$_3$) and ZOSTAĆ (AUX$_4$)

form the category of the Polish 'primary' auxiliaries. Functionally, AUX_3 and AUX_4 are aspectual variants of AUX_2. AUX_3 and AUX_4 are always followed by the past participle form of the main verb. AUX_3 is inflected for present and past tense, but it has no future tense:

12. Bywał często odwiedzany przez przyjaciół (past tense).
13. Bywa często odwiedzany przez przyjaciół (present tense).

AUX_3 does not catenate with the other primary auxiliaries and with at least some of the modal auxiliaires. 14 and 15 are rather doubtful and 16 is entirely unacceptable:

14. Będzie bywał często zapraszany na kolację (He'll be often invited to supper).
15. Musi bywać zapraszany (? He has to be invited).
16. Miejsce to może bywać odwiedzane przez turystów (? This place may be visited by tourists).

AUX_4 combines with the past participle of a 'perfective' verb to denote a completed action. Like AUX_2, AUX_4 possesses all the three tenses: *zostaje* (present), *został* (past), and *zostanie* (future).

17. Decyzja została powzięta tydzień temu (past tense).
18. Stare budynki zostaną zburzone (future tense).
19. (On) zostaje zaproszony na obiad (present tense).

Of some interest is 19, where *zostaje zaproszony* (is invited) does not say that the action is in progress at the time of the utterance. In 19 the meaning of present tense is, what could be described as "past in the historical present". In combination with a 'perfective' verb *zostaje* seems to be confined to past time contexts or to contexts typical of commentaries, especially when one is reporting something that cannot be seen by the listeners.

The following formulas will account for the forms of the full verb required by the particular primary auxiliary:

$$AUX_1+\begin{Bmatrix} V_{inf} \\ V_{a.p.\ pple} \end{Bmatrix}$$

V_{inf}=the infinitival form of the full verb
$V_{a.p.\ pple}$=the active past particle form of the full verb

$AUX_{2-4}+Ven$ (Ven=the passive participle form)

17. Będzie przemawiać (przemawiać przez dwie godziny (AUX_1+V_{inf}) $V_{a.p.\ pple}$)

Note that AUX_1 and AUX_2 may co-occur only when there is also a modal auxiliary in the VP.

The possible arrangements of the modal and primary auxiliaries then will be as follows:

1. AUX_1+M, 'będzie mógł'
2. $M+AUX_2$, 'musi być zrobiony'
3. $M+AUX_4$, 'ma zostać zburzony'
4. $AUX_1+M+AUX_2$, 'będzie mógł być napisany'

The Table below presents the grammatical categories of the modal auxiliaries:

Infinitive	móc	musieć	mieć	
Pres. Part.	mogący		mając	
Active Past. Part.	mógł	musiał	miał	
Perfect Part.				
Pres. Tense Ind.	mogę	muszę	mam	powinienem
Past tense Ind.	mogłem	musiałem	miałem	

The Past Tense Indicative form of the third person singular is indistinguishable from the Active Past Participle only at the level of the VP (cf. *on mógł przyjść* and *on będzie mógł przyjść*).

Conclusions.

On comparison, the list of the English modal auxiliaries turns out to be considerably richer than that adopted here for Polish. Therefore, to translate certain of the English modals, Polish often has to resort to the use of a different sort of construction. To take an example, the Polish learner of English would in vain look for a modal auxiliary equivalent of the English *shall*, as it is used in:

18. You shall be sorry.
19. You shall have the money tomorrow.

In 18 and 19 *shall* makes it explicit that the initiation of the action implied by the main verb is external to the subject of the sentences. The Polish translations of 18 and 19 are as follows:

18a. Pożałujesz!
19a. Dostaniesz te pieniądze jutro.

Note that the Polish translation equivalents contain no special word by which to render this particular meaning distinction. In both the Polish sentences the full verb appears in its perfective future tense form. Examples like 18 and 19 also seem to involve a special kind of intonation.

To take one more example, to refer to a past habitual action, English may use either *would* or *used to*, as in:

20. He would often come home dead tired.
21. People used to think that the sun travelled round the earth.

The function of these two modals is taken over in Polish by the 'imperfective' past tense form of the full verb (often combined with an adverb of frequency). The Polish translations of 20 and 21 are:

20a. Często wracał do domu śmiertelnie zmęczony.
21a. Ludzie wyobrażali sobie, że słońce obraca się dokoła ziemi.

The English and Polish modal auxiliaries appear to be similar with respect to the following features:

a. they are followed by the Infinitive;
b. they can be directly negated by *not* (in Polish the particle invariably precedes the modal);
c. they do not combine internally.

In opposition to the English modal auxiliaries, the Polish modals:

a. are inflected for person, number and tense;
b. possess non-finite forms;
c. may occur non-initially (though only in one case, viz. when the modal is preceded by AUX_1, i.e., the future tense auxiliary);
d. in question they need not necessarily invert with the subject NP.

Another structural difference between Polish and English has to do with the location of tense markers in the VP containing a modal auxiliary. In the case of modal VP's the 'deep' tense (or simply past time) may be associated either with the meaning of the modal auxiliary or with that of the full verb. Both in English and in Polish the modalities of the epistemics are tenseless, but the action of the full verb with which they happen to combine may be either present or past. It would then seem that the epistemics would be best described in terms of the universal tense qualifier (U) and their respective meanings (see Seuren 1969:147ff.). Thus, for example, the epistemic *must* might be described as follows: $U+Nec$ (*essity*). In 22. *It must have rained last night* the action conveyed by *rain* is past and the pastness here is signalled by the perfect auxiliary *have*. In the Polish equivalent of 22 the past tense marker is located in the modal element: 22a. *Musialo padać wczoraj*.

With the roots the situation is different. Here the meaning of the modal may be either present (i.e., contemporaneous with the time of the utterance) or past, or future, but the meaning of the full verb remains tenseless. This time in English and Polish the tense marker is located in the modal constituent of the VP. Consider the following English examples and. their Polish translations:

23. He must go (present obligation).
23a. Musi pojechać.
24. He had to go (past obligation).
24a. Musiał pojechać.
25. He'll have to go (future obligation).
25a. Będzie musiał pojechać.

Thus, as is shown by the above examples, unlike in English, in Polish the tense marker is always located in the modal element of the VP.

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TYPES OF VERB COMPLEMENTATION IN ENGLISH AND THEIR EQUIVALENTS IN POLISH

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The purpose of the present paper is a survey of verb complementation types in English, according to the pattern proposed by Quirk et al. (1972: 799–854), as compared with the equivalent forms in Polish. The subject will be considered only from the structural point of view to serve mainly pedagogical purposes.

English is taken to be L_1, i.e., the source language in this paper, while equivalent utterances in Polish, i.e., L_2, will be given either as congruent (strictly equivalent) versions, or if not acceptable—a loosely congruent structure, or else—an intralanguage translation paraphrase (for theoretical basis of this differentiation see Marton 1968, Krzeszowski 1971, Sharwood Smith 1976).

Quirk et al. (1972:820) distinguish four main types of complementation: (A) Intensive, (B) Monotransitive, (C) Ditransitive, and (D) Complex transitive.

(A) ***Intensive complementation*** occurs in sentences where there is coreference relation between the subject and the subject complement. Not all copulas (or linking verbs) in sentences with subject complements in English have strictly equivalent versions in Polish, some of them are expressed in Polish as verbs in different aspects (for further discussion see Lewandowska 1974), which reflects the differentiation between current and resulting copulas in English:

(1) to be sick — być chorym
vs.
(2) to fall sick — zachorować

(3) to be sour — być kwaśnym
vs.
(4) to turn sour — skwaśnieć

(A1) *NP complement*
(5) John is a nice boy
(5a) Janek jest miłym chłopcem

NP in subtype (A1) in Polish is assigned the Instrumental case marking with the appropriate gender and number marker.

(A2) *Adverbial complement*
(6) He is at school today
(6a) On jest w szkole dzisiaj

If Adv is expressed by a Prep P, the NP in Polish bears the case marking in agreement with the corresponding preposition: *w szkole*

(A3) *Adjective phrase complement without postmodification*
(7) John is very bright
(7a) Janek jest bardzo bystry

The Adj is expressed in Polish in the Nominative case with the appropriate gender marking, as well as number marking.

(A4) *Adjective phrase complement with prepositional phrase postmodification*
(8) He was shocked about her reaction
(8a) Był wstrząśnięty *jej reakcją* (Instr.)
(9) She was bad at mathematics
(9a) Była słaba *z matematyki* (*z*+Gen)
(10) She was interested in languages
(10a) Interesowała się *językami obcymi* (Instr.)
(11) She was aware of the difficulties
(11a) Była świadoma *trudności* (Gen.)
(12) His plan was based on co-operation
(12a) Jego plan był oparty *na współpracy* (*na*+Instr.)
(13) He is subject to criticism
(13a) Jest przedmiotem *krytyki* (Gen.)
(14) He was angry with her
(14a) Był zły *na nią* (*na*+Acc.)
(15) He was pleased with it
(15a) Był zadowolony *z tego* (*z*+Gen.)

The categories that are overtly expressed in the Adj of (A4) in Polish are identical to those of (A3). The case of the NP following the Adj or the Prep, as well as the preposition itself, are idiosyncratic in both the languages, hence they are most frequently translations or loose equivalents.

(A5) *Adjective phrase complement with finite clause postmodification*

Adj P may be expressed by an adjective: *I am sure — Jestem pewna*, participle: *I am annoyed — Jestem zaniepokojona*, or deverbal adjective: *It is desirable — Jest pożądane*. The subject is either personal or preparatory *it*. The verb in the *that*-clause postmodifying Adj P complement can be either indicative, or putative *should* in English. The Polish language employs in this case (*that*) *że-* clauses with indicative mood or *żeby-* clauses with dependent mood (verb takes the form of Preterite):

(16) I am sure that we'll be late
(16a) Jestem pewna, że się spóźnimy
(17) I'm surprised that he should resign
(17a) Jestem zdumiona, że zrezygnował
(18) It is likely that she never visited him
(18a) Jest pradopodobne, że nigdy go nie odwiedzała
(19) It is essential that he arrive by tomorrow
(19a) Jest istotne, $\left\{\begin{matrix}\text{żeby}\\ \text{aby}\end{matrix}\right\}$ przybył do jutra
(20) It is desirable that you read the book
(20a) Jest pożądane, $\left\{\begin{matrix}\text{żebyś}\\ \text{abyś}\end{matrix}\right\}$ przeczytała tę książkę

It is characteristic that in (A5) *żeby-* clauses with the dependent mood in Polish most often correspond to *that-* clauses having a subjunctive verb in English. The Polish complementizer $\left\{\begin{matrix}\text{aby}\\ \textit{żeby}\end{matrix}\right\}$ is marked with the category of person and number: *żebym — that I, żebyś — that you* (Sg), *żeby — that* $\left\{\begin{matrix}\textit{he, she, it}\\ \textit{they}\end{matrix}\right\}$ *żebyśmy — that we, żebyście — that you* (Pl).

(A6) *Adjective phrase complement with to-infinitive postmodification*

This type of complementation containing several superficially similar but basically different constructions in English renders a variety of distinct structures in Polish, very rarely congruent to the English version.

(21) He is splendid to wait — It is splendid of him to wait — It is splendid that he waits
(21a) To cudowne, że on czeka (*that*-clause with indicative verb)
(22) He is hard to convince — To convince him is hard — It is hard to convince him
(22a) Przekonać go jest trudno — Jest trudno go przekonać (infinitive in subject position)
(23) He was quick to react — He reacted quickly
(23a) Zareagował szybko (V+Adverbial)

(24) The dress is easy to wash — It is easy to wash the dress — The dress washes easily

(24a) Jest łatwo uprać tę sukienkę (Inf+NP+Cop+Adv), Uprać tę sukienkę jest łatwo

(24b) Ta sukienka pierze się łatwo (NP+V (pseudo-refl.)+Adv)

(24c) Ta sukienka jest łatwa do prania (NP+Cop+Adj+Prep+Gerund)

(25) I was indignant to hear about it — To hear about it made me indignant — It made me indignant to hear about it

No strictly equivalent version of this type exists in Polish, where either the participial construction or a temporal clause will be used:

(25a) Byłem oburzony słysząc o tym (=hearing about it)

(25b) Byłem oburzony, gdy o tym usłyszałem (=when I heard about it)

(26) I am (rather) prone to agree with you

with strictly equivalent version in Polish:

(26a) Jestem (raczej) skłonny zgodzić się z tobą

but: (27) I am reluctant to agree with you

rendered as:

(27a) Nie jestem skłonny zgodzić się z tobą

corresponds to negated (26) rather than to (27).

(B) *Monotransitive complementation*

Since both in English and Polish verbs can be followed by nominal and clausal objects playing a number of semantic functions, it would not be possible to consider all the relations in the present paper. Therefore only the most common subclasses will be exemplified here.

B1) *Noun phrase objects*

(28) The policeman stopped the car — The car was stopped by the policeman

(28a) Policjant zatrzymał auto — Auto zostało zatrzymane przez policjanta

(29) John and Mary liked the new neighbours — The new neighbours were liked by John and Mary

(29a) Jan i Maria lubili nowych sąsiadów — Nowi sąsiedzi byli lubiani przez Jana i Marię

B2) *Prepositional objects*

The prepositional object may be a noun, a pronoun, an *-ing*, or a *wh*-clause in English. In Polish it may be also a noun, a pronoun, or a gerundial form deverbal or verbal noun, corresponding to an *-ing* in English. In Polish, however, some of the objects having prepositional equivalents in English, are expressed by case relationship:

(30) He objected to it
(30a) Sprzeciwił się *temu* (Dat.)

As to the sentential objects introduced by prepositions, the Polish language obligatorily employs the pronoun *to* in an appropriate case, placed between the preposition and the complementizer. The type of sentential object in Polish is not limited to *wh*-clause, as is the case in English, but can be also *that*-clause:

(31) He concentrated on the problem
(31a) Skoncentrował się na tym problemie
(32) He concentrated on that
(32a) Skoncentrował się na tym
(33) He concentrated on solving the problem
(33a) Skoncentrował się na rozwiązywaniu tego problemu
(34) He concentrated on how he should solve the problem
(34a) Skoncentrował się na *tym*, $\left\{\begin{array}{l}\text{jak}\\ \text{że lit. }\textit{that}\end{array}\right\}$ ma rozwiązać ten problem

also

(34b) Skoncentrował się na tym, jak rozwiązać ten problem

infinitival construction corresponding to:

(34c) He concentrated on the fact (lit. on this) how to solve the problem

cf. also Polish *że*- complementation:

(35) Słyszał o tym, że przyjechali

being equivalent to the English:

(35a) He heard about the fact (lit. about this) that they arrived in both the languages identical to the corresponding nominal versions:
(36) He heard about their arrival
(36a) Słyszał o ich przyjeździe.

(B3) *Finite clause objects*

In both languages the finite clause objects are *that* and *wh*-clauses. In English, this subclass of monotransitive complementation may have, analogically to type (A5), three types of verb phrase: indicative and subjunctive verb, as well as the putative *should*. In Polish *that*- and *wh*-clauses with the indicative verb correspond most frequently to *że*- and *Q*-clauses, while the English *that*- complements with verbs taking putative *should* and subjunctive verbs are rendered into Polish as $\left\{\begin{array}{l}\textit{żeby}\\ \textit{aby}\end{array}\right\}$ — clauses in dependent mood, as in the following examples:

(37) I suppose that he will come
(37a) Przypuszczam, że przyjedzie
(38) I wonder if they are coming
(38a) Jestem ciekawa, czy jadą
(39) I don't know why he left London

(39a) Nie wiem, dlaczego opuścił Londyn
(40) I ask that she (should) go alone
(40a) Proszę, żeby poszła sama
(41) I suggest that we (should) stay here
(41a) Proponuję, żebyśmy tu zostali.

Non-finite clause objects

The criterion of differentiation between different subtypes of this class is the presence or absence of the overt subject of the non-finite object, as well as the disctinction between infinitival and participial verb clauses:

(B4) *To-infinitive without subject*

(B5) *-ing participle without subject* (the term participle is used here informally).

Though both in English and Polish there are classes of verbs which take either only the infinitive, or only the participle, or else, either the infinitive or the participle, they do not always correspond to one another, hence demanding a separate extensive study based upon the contrastive principles (Lewandowska: the work in progress).

(42) I managed to do it
(42a) Zdołałem to *zrobić* (infinitive)
(43) He wants to eat something
(43a) On chce coś *zjeść* (infinitive)
(44) Mary avoided meeting him
(44a) Maria unikała *spotkania* (go) (*-anie* form corresponding to *-ing*)
(45) Tom risked bringing the gun here
(45a) Tomek zaryzykował *przyniesienie* karabinu tutaj (*-enie* corresponding to *-ing*)

vs.

(46) Stop talking (*-ing* form)
(46a) Przestańcie *rozmawiać*! (infinitive)
(47) She finished *washing up* (*-ing* form)
(47a) Skończyła *zmywanie* (naczyń) (*-anie* form)
(47b) Skończyła *zmywać* (naczynia) (infinitive)

There is a difference in meaning in the infinitive and participle constructions complementing the same verb. Most frequently the factor governing the choice of the complement is aspect: durative with participles and perfective with infinitives. The Polish language will use either $\left\{\begin{matrix}\textit{-enie}\\ \textit{-anie}\end{matrix}\right\}$ nominal or a participial construction *sensu stricto* in the first case, and the same type of nominal though derived from perfective verb, or else a finite clause complement, in the latter. Cf:

(48) I heard the door slamming all night long

(48a) Słyszałem *trzaskanie* drzwiami całą noc (from durative or iterative verb *trzaskać*)

(49) I saw him crossing the street

(49a) Widziałam go *przechodzącego* ulicę (Present Prt. with Case Gender and Number agreement with the object *go*)

(50) I heard the door slam just after the midnight

(50a) Usłyszałam *trzaśnięcie* drzwi zaraz po północy (from perfective *trzasnąć*)

(50b) Usłyszałam, $\left\{\begin{array}{l}\textit{że}\\ \textit{jak}\end{array}\right\}$ drzwi trzasnęły zaraz po północy

(lit. I heard $\left\{\begin{array}{l}\textit{that}\\ \textit{how}\end{array}\right\}$ the door slammed...)

(B6) ***To- infinitive with subject***

A few subclasses of complementation can be distinguished in this type in English:

(51) I allowed him to come

(52) I expected him to come

(53) I believe him to be an honest man

Some of the constructions of this type in Polish are in the strict equivalence relation to their English versions. Cf.:

(51a) Pozwoliłam mu przyjść

Quite a numerous group of verbs in both languages enters the same pattern. Compare:

(54) I (advised, forbade, ordered, taught) him to read English fiction

(54a) $\left\{\begin{array}{r}\text{(Poradziłam, zabroniłam, rozkazałam) mu (Dat.)}\\ \text{nauczyłam go (Acc.)}\end{array}\right\}$ czytać powieści angielskie

While the class represented by examples (51) and (54) has a strict equivalence pattern in Polish, sentences with verbs such as in (52) would be translated into Polish as constructions with finite (*that*) *że*-clause complements:

(52a) Oczekiwałam, *że* przyjdzie

constructions with $\left\{\begin{array}{l}\textit{aby}\\ \textit{żeby}\end{array}\right\}$-clause complements in dependent mood:

(55) I wanted him to come

(55a) Chciałem, $\left\{\begin{array}{l}\textit{aby}\\ \textit{żeby}\end{array}\right\}$ przyszedł

constructions with $\left\{\begin{array}{l}\textit{aby}\\ \textit{żeby}\end{array}\right\}$ clause, preceded by a direct object taken by the main verb:

(56) I persuaded him to come

(56a) Przekonałem *go*, aby przyszedł,

or prepositional NP with gerundial nominals:

(57) I forced him to come
(57a) Zmusiłem go *do przyjścia*

being strictly equivalent to:

(57b) I forced him into coming

Class of constructions compatible with such verbs as *believe* in (53) is paraphrased in Polish as *że*–clause complements with the finite verb:

(58a) Wierzę, że jest uczciwym człowiekiem
(58) He imagines himself to be a linguist
(58a) Wyobraża sobie, że jest językoznawcą

There is another type of infinitive complementation in English, where the subject of the infinitive is marked with *for*. Some such constructions will have loosely equivalent versions in Polish, as in:

(59) It's a tragedy for her to live like that
(59a) Jest tragedią dla niej żyć w ten sposób

more on infinitives in Polish and English see Lewandowska (this volume), or paraphrase relation only:

(60) He hoped for Mary to come
(60a) Miał nadzieję, że Maria przyjdzie

with *że*- clause in indicative mood, or:

(61) They telephoned for a doctor to come
(61a) Zatelefonowali, aby przyszedł lekarz

with *aby*- clause in dependent mood without a prepositional object, (They telephoned that a doctor come- lit.) or with a prepositional phrase following the main verb:

(61b) Zatelefonowali po lekarza, aby przyszedł
(lit. They telephoned for a doctor that he come).

(B7) *Bare infinitive with subject*

The regular occurrence of bare infinitive after verbs of perception in English has no strict equivalence in Polish. Therefore the discussion of (B7) as well as (B8), *-ing participle with subject*, can be limited in this sketchy work to those few remarks on the subject given on p. 222 in the description of (B4) and (B5).

(B8) *-ed participle with subject*

No strict equivalents are to be found in Polish, either. This subtype of complementation is expressed in Polish either as a finite clause complement of *że*- or *jak*–type, or a nominalized item (expressing a fact or a product of an action):

(62) He reported the watch stolen — He reported that the watch was stolen
(62a) Doniósł, że skradziono zegarek

(62b) Doniósł o kradzieży zegarka
(lit. He reported about the theft of the watch)
(63) He heard the vase broken — He heard that the vase $\left\{\begin{array}{l}\text{got}\\ \text{was}\end{array}\right\}$ broken
(63a) Słyszał, $\left\{\begin{array}{l}\text{że}\\ \text{jak}\end{array}\right\}$ wazon rozbił się

No general rule can be postulated in Polish for this construction introduced by such verbs as: *have, keep, want*, etc.:

(64) I had my hair cut
(64a) Ścięłam sobie włosy

being ambiguous between (64) and (65):

(65) I have cut my hair
(66) I wanted two tickets reserved
(66a) Chciałam zarezerwować dwa bilety

with two readings again, one equivalent to (66), the other to (67):

(67) I wanted to reserve two tickets. Another construction with *aby*-clause is possible as well:
(66b) Chciałam, aby zarezerwowano mi dwa bilety, corresponding to:
(66c) I wanted that two tickets (should) be reserved for me.

(C) *Ditransitive complementation*

(C1) *Indirect+direct noun phrase object*

This type of ditransitive complementation occurs with verbs like *give* and *buy* in English, which can take two objects: direct and indirect. The indirect object can be sometimes omitted, it can also appear as a prepositional paraphrase.

(68) He gave the girl a doll
(69) He gave a doll
(70) He gave a doll to the girl
(71) He bought the girl a white hat
(72) He bought a white hat
(73) He bought a white hat for the girl

In Polish, type (C1) occurs with the equivalent verbs such as *dać* or *kupić*, though the order of the two objects is not fixed, because of the inflectional endings of both the objects: direct object-Accusative, indirect object-Dative:

(68a) Dał dziewczynce lalkę — Dał lalkę dziewczynce
(71a) Kupił dziewczynce biały kapelusz — Kupił biały kapelusz dziewczynce

The indirect object can be also omitted: in self — explaining contexts:

(69a) Dał lalkę
(72a) Kupił biały kapelusz

while only in some cases the indirect object can take a prepositional paraphrase without changing the basic meaning:

(73a) Kupił biały kapelusz dla dziewczynki

vs.

(74) Dał lalkę dla dziewczynki

which is not an equivalent of (70) but rather of:

(75) He gave a doll (to somebody) for a girl.

Another subtype of verbs with ditransitive complementation includes such verbs as: *ask– pytać*, *teach– uczyć*, *tell– powiedzieć/opowiadać*, *pay– płacić*, *show– pokazywać*. Basically, either object can be omitted both in English and Polish, though the prepositional paraphrase is possible only in English:

(76) I paid John a bill
(76a) Zapłaciłam Jankowi rachunek
(77) I paid John
(77a) Zapłaciłam Jankowi
(78) I paid a bill
(78a) Zapłaciłam rachunek
(79) I paid a bill to John—no Polish equivalent.

(C2) *Direct+prepositional object*

Type (C2), similarly to all classes including prepositional objects, contains many idiosyncratic syntactic features of verbs taking non-equivalent prepositions in either of the two contrasted languages. To discover all the similarities and differences within this type then, it would be worthwhile to compare particular subtypes of constructions in one language with the set of equivalent structures in the other. In our brief sketch, however, it will be only possible to point out certain specific cases. Cf.:

(80) We compare Polish with English
(80a) Porównujemy polski z angielskim
(81) The government supplied food for the homeless
(81a) Rząd dostarczył żywność dla bezdomnych
(82) The government supplied the homeless with food — no strict equivalent in Polish
(83) Rząd dostarczył żywność bezdomnym (Dat.) — no strict equivalent in English
(84) We reminded him of the agreement
(84a) Przypomnieliśmy mu o umowie (lit. *about* the agreement)

In some cases however the alternatives do not seem to be strict paraphrases (81–82).

A special subtype of complex objects can be mentioned in connection with sentence elements of the following order: Verb+noun phrase+prepositional phrase idioms. Naturally, this class of complementation types will be still more language specific, hence deserving a separate extensive study. To stress the problem, let's compare:

(85) I lost sight of him
(85a) Straciłam go z oczu (lit. I lost him from my eyes)
(86) I didn't pay attention to it
(86a) Nie zwracałam na to uwagi (lit. I didn't turn my attention on it)

vs. almost strictly equivalent:

(87) He lost touch with me
(87a) Stracił kontakt ze mną (He lost contact with me).

(C3) *Noun phrase+finite clause object*

The finite clause object in both languages may be either *that/że-* clause or *Wh/Q-* clause:

(88) John convinced me (that) he was right
(88a) Janek przekonał mnie, że miał rację
(89) Tom asked me if I was coming
(89a) Tomek zapytał mnie, czy przyjdę

Some of the verbs admit the noun phrase deletion:

(90) Peter showed me that he was honest —
Peter showed that he was honest
(90a) Piotr pokazal mi, że jest uczciwy —
Piotr pokazał, że jest uczciwy.

(C4) *Prepositional phrase+that-clause object*

This class is distinctive only in English: verbs included here take the preposition *to* and allow omitting the prepositional object:

(91) John mentioned to me that he had been sick —
John mentioned that he had been sick

In Polish, the majority of equivalent verbs will belong to type (C3), where the object is marked by an appropriate inflectional ending:

(91a) Janek wspomnial mi (Dat.), że był chory,

admitting also the omission of the object:

(91b) Janek wspomniał, że był chory

Some of the verbs entering this construction, however, can take either the object with the case marking alone, or the object preceded by a preposition:

(92) Kasia powiedziala mi, że przyjdzie —
Kasia powiedziala do mnie, że przyjdzie
(92a) Kate told me that she would come —
Kate said to me that she would come

— the English language uses a different verb in this case.

(93) She complained (to me) that she couldn't do it
(93a) Narzekała (do mnie), że nie może tego zrobić

Sentences (93, 93a) are the example of a rare case of a complete equivalence in this type of complementation.

(D) *Complex transitive complementation*

(D1) *Object+noun phrase complement*

Though this type of complementation occurs both in English and Polish, not all instances of its occurrence are equivalent. Cf.:

(94) The king made him a duke

(94a) Król mianował go księciem (also:... zrobił go...)

The second object in Polish is marked with the Instrumental case with the appropriate inflectional ending (the categories of gender and number are overtly marked too).

Compare, however:

(95) We considered him
- a genius (D1)
- as a genius (D2)
- to be a genius (B6)

whose equivalent structure in Polish would be only:

(D2) *Object+preposition+noun phrase complement*

(95a) Uznaliśmy go za geniusza

The most frequent preposition in English appearing in this pattern is *as*, rarely *for*:

(96) He took me for a fool

The equivalent Polish preposition will be *za*, mentioned above, corresponding either to *as* (95a) or *for*:

(96a) Wziął mnie za głupca.

In some cases the prepositions *jako* or *jak*, are used:

(97) He took these words as evidence

(97a) Przyjął te słowa jako dowód (also: za dowód)

(98) He treated me as a king (ambiguous between *asking*=I and *a king=he*)

(98a) Traktował mnie jak króla. (*a king=I*) and (98b)... jak król (*a king=he*)

(D3) *Object+adjective phrase complement*

(99) We painted the house white

(100) We imagined the house pink

(101) We considered the house beautiful

(102) We made the house beautiful

Most of the equivalent constructions in Polish will belong to (D4):

(99a) Pomalowaliśmy dom na biało (lit. on white)

(100a) Wyobraziliśmy sobie ten dom jako różowy (lit. as pink)

(101a) Uważaliśmy ten dom za piękny (lit. as/for beautiful)

The strict equivalence pattern is very rare. Cf. (102):

(102a) Uczyniliśmy dom pięknym,

where the adjective agrees with the preceding NP in Gender and Number, and is assigned the Instrumental case marking.

(D4) *Object+prepositional adjective phrase complement*

As was mentioned above, the majority of Polish constructions equivalent to (D3) will have to be classified as belonging to (D4)–ex. (99a, 100a, 101a). The preposition most frequently occuring in this type in English, is *as*, being equivalent to the Polish *jako*:

(103) The teacher described him as hopeless

(103a) Nauczyciel określił go jako beznadziejnego

(the adjective in agreement with the preceding NP in Gender and Number, with the Acc. case marking)

Much more often, however, such a complementation in Polish will contain a NP following the Adj P:

(104) Nauczyciel określił go jako beznadziejnego ucznia

(104a) The teacher described him as a hopeless pupil.

*

* *

This short survey of verb complementation types in English and Polish has not been meant to be either original or exhaustive. It can only signal those non-equivalent structures in both the languages which should be especially taken care of in the process of teaching, because of their contrasts, as well as the equivalent constructions, which are not likely to cause so much trouble. The next stage in contrastive analysis of verb complementation should be an attempt at a similar classification with the Polish language taken as an L_1 and the English language as an L_2, which, as it seems, would allow to grasp some more important generalizations about equivalent and non-equivalent structures across languages.

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ENGLISH AND GERMAN POSSESSIONAL ADJECTIVES: A LINGUISTIC EXPLANATION FOR AN ERROR OF OMISSION

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One argument for the inclusion of contrastive linguistics into the university syllabus for prospective language teachers is that it provides for a more economical way of teaching the target language. This argument has acquired a very special meaning for quite a number of students as well as teachers already engaged in practical work at schools. They think that they have to concentrate their teaching on areas in which there are interlanguage differences and may leave out those in which the mother-tongue of their pupils and the foreign language agree. In this way, they believe, they can economize on their time arguing that in the minds of the pupils a simple process of transfer of learning will take place, which will enable them to acquire the foreign structures without special training. Since this conviction is widespread and since indeed some general introductions to contrastive studies[1] may be made responsible for it, it is necessary not only to point out that this is an oversimplification of the process of learning a foreign language, but also to explain in a particular case that a construction cannot be viewed in isolation but must be viewed as part of an interlocking system.

The problem may be illustrated within English and German by the structures covered by the term *possessional adjective*[2]. They are prenominal attributes like the following:

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[1] In these introductions the term "contrastive" itself may mean either the differences alone or the differences and similarities between languages. Cf., e.g., the following statements: Wir nennen dies eine Kontrastive Analyse, weil es nur die Unterschiede, die Kontraste sind, die uns hier beschäftigen (Kufner 1971 : 12). "This study is part of a series of contrastive structure studies which describe the similarities and differences between English and... five foreign languages..." (Ch. A. Ferguson in Kufner 1962:VI).

[2] The term is taken from Jespersen (1914 : 375).

das buntgestreifte Band (96) — *the gaily-striped ribbon* (109)
das goldgeränderte Porzellan (135) — *the gold bordered porcelain* (152)
der edel geformte Mund (199) — *the nobly formed mouth* (224)
eine langgestielte Lorgnette (90) — *a long-handled lorgnon* (102)[3]

These constructions may be related in English and German to an underlying structure containing a PRO-verb that we can think of as HAVE or HABEN respectively (Quirk et al. 1972 : 100; Brinkmann 1959). E.g., *ein buntgestreiftes Band* may be derived from *ein Band, das bunte Streifen hat* and *a gaily-striped ribbon* from *a ribbon that has gay stripes*. Again in English and German they are part of a wider area defined by the existence of the same verbs HAVE and HABEN in the underlying structure. The structures they are related to are realized by the genitive in German and a case form marked by *'s* or a prepositional phrase containing *of* in English, e.g. *des Mannes Wagen — the man's car* or *the car of the man*. These phrases may be circumscribed as *der Mann hat einen Wagen* and *the man has a car*. The close relation of this construction type and the *possessional adjectives* may be illustrated by the following sequence:

the red-lipped girl
the red lips of the girl
the girl's red lips

Both German and English possessional adjectives are distinguished from the forms just mentioned by the fact that the noun in the embedded sentence of the underlying construction has to be an optional or obligatory part of the one it is to be made an attribute of (Hirtle 1969; Ströbel 1970). In our first example, *the gaily-striped ribbon*, *stripes* may be regarded as an optional characteristic of *ribbon*. In the construction *the red-lipped girl* the notion of *lip* is an integral part of the notion of *girl*. Generally speaking, this part — whole relationship, a necessary condition for the application of the rule that generates *possessional adjectives*, distinguishes these from the related construction *the man's car* and *der Wagen des Mannes*. *A car* is not part of *a man* and thus we may not say something like **the carred man* or **der bewagte Mann*.

Thus, there seems to be a sound enough basis for saying that English and German *possessional adjectives* are similar in both languages. Indeed, they would perhaps be derived from identical underlying structures in a comparative English and German grammar. The transformation applying to them would very often result in a structural change that would clearly indicate this fact. A morphological rule which operates in a small number of cases in German and which would tend to obscure the common rule will be discussed below.

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[3] These examples and others given with page numbers, unless otherwise noted, are taken from Mann (1960) and its translation Mann (1957).

If it were true, then, that constructions based on common rules in source and target language take care of themselves in the process of language learning, a German Abitur candidate should be able to use them freely when the opportunity arises. This, however, does not seem to be the case. An investigation undertaken in Paderborn in April 1973 of fifty Abitur examination papers of students whose teachers had not given them any special exercises pertaining to the construction under discussion showed that about half the candidates could repeat correctly an example given in the text that they had to reproduce. E.g.; one text read to a group of 13 students contained the construction *the ash-coloured children*. 5 of those 13 students repeated the phrase; the others used an adjective proper like *brown* or left the modification out altogether. None of the students could generate a *possessional adjective* by himself although the wording of the text provided the opportunity to do so. E.g., the students preferred the expression a *chauffeur in uniform* or even the awkward *a chauffeur in a uniform* to *a uniformed chauffeur*. At first sight this is all the more surprising since *possessional adjectives* are very much part of written English and furthermore this particular group of students came across the form as early as their third, out of ten years of English.

There are several reasons, however, that can be given from a linguistic point of view for the students' reluctance to use an English *possessional adjective*.

The first point is based on the fact that *possessional adjectives* in English and German grammar can be traced back to the optional embedding of a sentence in the underlying structure. This implies that for the generation of a grammatical sentence no attention has to be paid to the embedding at all and that the information in the embedded structure may be expressed in a separate sentence. In the sentence *He presented her with a gaily-striped ribbon* the modifier *gaily-striped* may be left out and the sentence is still grammatical: *He presented her with a ribbon*. Or we may connect it with a construction like *It had gay stripes* and by this means preserve the information content in the original sentence. Thus we are confronted with an entirely different situation from one in which an obligatory embedded sentence is required. In such case some special grammatical structure may have to be used and would therefore be practiced automatically by the student. With *possessional adjectives*, however, it is not only the case that they derive from an optional embedding but also that they are the results of a structural change of just one of a number of transformational rules which could have applied. In both English and German *the gaily-striped ribbon* or *das buntgestreifte*

Band can be paraphrased using either a relative clause or a prepositional phrase: *the ribbon that has gay stripes* and *das Band, das bunte Streifen hat,* or *the ribbon with gay stripes — das Band mit bunten Streifen.* Thus we see that in English and German the use of a *possessional adjective* is not only optional but actually competes with different construction types that derive from the identical underlying structure.

One may also point out here modification structures that are related to *possessional adjectives* but less clearly than those just mentioned. A few examples from a German original, Thomas Mann's *Buddenbrooks* and its English translation by R. T. Lowe-Porter will serve as a short cut to establish an inter-language relationship. Judging from these texts, *possessional adjectives* most often share characteristics with adjectives and second participle attributes.

ein schwarzgefleckter Jagdhund (13) —
a black and white hunting dog (14)

ihre schwarzen, länglich geschnittenen Augen (290) —
her narrow black eyes (328)

a coffee-coloured coat (383) —
ein kaffeebrauner Leibrock (337)

a clear-sighted man (403) —
ein heller Kopf (355)

The next set of examples will uncover the relation between attributive second participles and *possessional adjectives.* Again the structures show that the relation works both ways.

ein grünbezogener Tisch (152) —
a table covered with green baize (170)

the lace-edged pillows (258) —
das von Spitzenborten umgebene Kissen (229)

the gilt-lined silver basin (307)
die silberne, innen vergoldete Schale (272)

From these examples we can deduce the following explanation of the observation made above concerning German students' reluctance to use English *possessional adjectives.* From the standpoint of English grammar there is no syntactic necessity to use the construction. The students are not obliged to use *possessional adjectives* to communicate their semantic content because there are a number of equivalent construction types they could use.

A second problem the students face concerns the formal means German and English grammars provide for recognizing ***possessional adjectives***. In English these attributes are generally identical with the form of second participles; that is to say, they are marked in most cases by the suffix spelled *-ed* as in ***good-mannered, fearless hearted, sweet voiced***, etc. This identity of form is so developed in English that in those cases in which the attributed noun has the same phonemic structure as a so-called irregular verb, this noun takes on the same form as the verb used as a second participle. For example, the lexical items ***spring*** and ***build*** are nouns in the sentences ***The mattress has good springs, The man has a powerful build***, and verbs in ***He wants to spring over the ditch, He wants to build her a chest***. The verbs ***to spring*** and ***to build*** have an irregular second participle, i.e., ***sprung*** and ***built*** respectively and the ***possessional adjectives*** are ***well sprung, powerfully built*** and not ****well-springed, *powerfully builded***. In German the situation is more complicated. As with the second participles of verbs, we have one group of ***possessional adjectives*** that are introduced with the prefix *ge-* while another group is not. For example we find ***die langgestielte Lorgnette*** as opposed to ***der begüterte Kaufmann, das goldgeränderte Porzellan*** as opposed to ***die blondbehaarte Hand***. Again, as is the case with second participles of verbs, ***possessional adjectives*** in German feature two different kinds of endings, one is spelled *-t*, the other ***-en***, as in ***seine gehöckerte Nase, das gesprungene Glas***. With some German ***possessional adjectives***, however, an obligatory transformation applies which replaces the verbal suffix *-t* and ***-en*** by the adjectival suffix spelled *-ig* as in ***ein hochlehniger Stuhl, eine einseitige Erklärung, ein dorniger Strauch***, etc.

To round off this short characterization of the formal aspect of German and English ***possessional adjectives*** just one last point should be mentioned. It is illustrated by the following sentences and their corresponding ***possessional adjectives***:

Seine Hände haben zartblaue Adern — seine zartblau geäderten Hände
Die Weste hat blaue Karos — die blaukarierte Weste.
Das Porzellan hat einen goldenen Rand — das goldgeränderte Porzellan.

The examples show that in some German ***possessional adjectives*** a conversion from noun to verb has taken place in the process of correctly generating the structures. This type of structural change does not occur in English although some change of form does occur in a highly restricted number of cases, e.g. in a *loose-leaved book*. The from *leaved* is derived from the noun *leaf*. It does not represent a conversion to the verb ***to leave*** but rather reflects the fact that a certain number of nouns ending in a voiceless labiodental fricative have the feature ***voiceless*** of this consonant changed to ***voiced*** when it loses its final position. This process has also been operative in the generation of the possessional adjective ***short-lived*** as in ***a short-lived price freeze***. In this case, however, the same additional shortening of the vowel has taken place as in *rough shod*, a form which, if it had been regularly made, would be *rough shoed*.

The close resemblance of German and English *possessional adjectives* to the attributed second participle makes it very difficult for a student to identify them correctly. He has to learn to distinguish a *possessional adjective* from a second participle construction and, thus, he has actually not only to learn to recognize the first, but also to recognize the second. Before any successful transfer of learning can take place, a student has to be able to recognize clearly the structure he is supposed to acquire. For a German student, in this case, this task is the more difficult for a number of reasons. First we might mention that English lacks an equivalent rule to the German one that generates *possessional adjectives* in *-ig*. In German the presence of the suffix is a clear indication that the attribute under consideration is not a second participle. Thus the item *glockenförmig* in *der glockenförmige Rock* will be immediately recognized as a *possessional adjective* while the English translation equivalent *the bell-shaped coat* may mean both the coat that has the shape of a bell or the coat that has been shaped like a bell. A second difficulty lies in the fact that in English there are a considerable number of nouns and verbs which are identical in their phonemic structure. For example, the item *husk* is both a noun and a verb whereas the German equivalent would be *Hülse* and *enthülsen*. Through the presence of the prefix *ent-* the message of the following sentence is immediatedy clear:

> *Succotash ist ein indianisches Wort, das ursprünglich enthülster Mais bedeutete.*

However, if you said to a German student of English (*International Herald Tribune*, September 13, 1972 : 8) *Succotash is an Indian word which originally meant husked corn*, he may very likely consider *husked* a *possessional adjective*. Similarly, the existence of a noun *pinion* and a verb *to pinion* will make it very difficult to decide what is meant by the construction *the tall, pink pinioned birds strut around, goosestepping in cadence* (ibid., January 9, 1973: 14). The German student may be unable to decide which of the following two interpretations is the correct one:

the tall birds, which have pink pinions
the tall, pink birds which have been pinioned.

The regular distinction in English between adverbs and adjectives by the ending *-ly* is the third reason German students are unwilling to use *possessional adjectives*. The fact that a formal differentiation of this kind does not exist illustrates the point that for an unaided transfer of learning to take place it is not sufficient that a certain type of construction is governed by the same rule in two languages, but that attention has to be paid to how the identical rule reflects distinctions that are made in some other section of the grammar of the two languages. In this particular case we have to pay attention to the fact that there may be two English equivalents to one German construction as is the case with:

die merkwürdig geformte Schachtel which equals both:
the curious shaped box
the curiously shaped box.

This shows that a German student dealing with *possessional adjectives* in English has to take note of a distinction he has become acquainted with while learning the first characteristics of the English noun phrase and the English verb phrase.

The conditions that are valid in these contexts, however, do not apply exclusively within those constructions that contain *possessional adjectives* or second participle attributes. The student turning to the question what rules apply here is in very much the same position as a linguist embarking on a new field of study. It is obvious, however, that he is in a much more difficult position. It is not one rule he has to discover but several to which the infamous exceptions have to be added. To give an idea of what the student who is being left alone to learn *possessional adjectives* has to find out, here are some first results of a questionnaire presented to twenty native speakers of English. There is general agreement about the grammaticality and difference in meaning of the constructions like the following:

the different coloured car — *the differently coloured car*
the moderate sized college — *the moderately sized college*
the queer shaped case — *the queerly shaped case*
the strange windowed house — *the strangely windowed house.*

The special characteristic of the constructions is that the form in *-ed* is marked as both noun and verb in the lexicon and the difference in meaning agrees with this. Thus *a different coloured car* is a car that has a different colour, it may be black while all the others are white. *Differently coloured cars*, on the other hand, are cars which have been coloured differently, one may be white, the other black, a third may be red, and so on.

In the next group of examples both adjective and adverb are correct and the form suffixed by *-ed* may be taken as a noun or a verb. But in contrast to the first set of constructions, adverb and adjective seem to be freely exchangeable without any alteration of the meaning. Thus we find:

a sweet voiced girl — *a sweetly voiced girl*
a perfect shaped face — *a perfectly shaped face.*

Part of the explanation for this phenomenon is based on collocational restrictions that exist in the underlying structure; e.g., we can only say: ***the girl who has a sweet voice*** and not ****the girl who has been voiced sweetly***. This observation is connected with the fact that you can say: ***the complaint that has been sweetly voiced*** and ***the sweetly voiced complaint*** but not ****the complaint that has a sweet voice*** and ****a sweet voiced complaint***, or we might say the other way round that there has to be a difference in meaning between ***a strong featured actress*** and ***a strongly featured actress*** because ***strong*** collocates with the noun *feature* and ***strongly*** with the verb ***to feature***.

While in the two sets of examples just mentioned both adjective and adverb were correct, there is quite a large group in which the choice between them is directly related to the grammaticality of the construction. This is, for example. the case with those ***possessional adjectives*** which derive from nouns such as ***eye, heart, hand, head, brain, body, blood***. Thus it is only correct to say: ***the fearless hearted soldier*** and not ****the fearlessly hearted soldier, the strong headed father*** and not ****the strongly headed father***, etc. It may be interesting to note that a number of those questioned not only accepted ***the heavily armed soldier*** but also ***the heavy armed soldier***. The latter, however, meant to them that the soldier had heavy limbs.

Thus it is no wonder that the poor German student of English does not attempt the ***possessional adjective*** despite its close relation to the German. He much prefers to use one of the other related structures so that he does not have to identify it or to make decisions based on the interlocking of ***possessional adjectives*** with regularities that contrast in the two languages.

The opinion stated at the beginning of this paper that an unaided transfer of language learning may take place when the construction types do not contrast is not relevant to ***possessional adjectives*** for the following three reasons: First, syntactially, there is no necessity to employ the form; second, for a successful transfer of learning to take place the grammatical construction has to be clearly identifiable. This is not the case with German and English ***possessional adjectives*** because of their close formal relatedness to attributed second participles. Third, German and English ***possessional adjectives*** are part of the total language system and are tied up with regularities that contrast in the two languages thus introducing a learning difficulty.

In conclusion one may predict the unaided transfer of learning in a student only when the following questions may be answered positively:
Is there a syntactical necessity for the student to use the structure concerned?
Is it conditioned only upon structures that do not represent a learning problem?

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SEMANTIC PROBLEMS WITH "LEFT" AND "RIGHT"

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In the infinite class of prenominal modifiers adjectives *left* and *right* constitute a pair which merits attention because of its exceptional semantics reflecting the way in which human beings perceive reality and organize their conceptions of space[1]. Challenging problems arise when a semantic description of NP's containing adjectives *left* and *right* is attempted. The aim of this paper is to examine some aspects of the semantics of these two adjectives on the basis of the language data from English and Polish. It is assumed that a close link between syntax and semantics exists and that semantic properties of NP's containing adjectives *left* and *right* influence linguistic behaviour of these NP's.

Syntactically, prenominal adjectives *left* and *right* have been described as belonging to the class of non-copulative and not denominal adjectives whose derivation constitutes a problem for Chomskyan analysis of attributive adjectives, since they do not have grammatical sources being prohibited in predicative position. NP's containing these adjectives such as *the right side* in English and the corresponding *die rechte Seite* in German were quoted by Winter (1965:485-6) as examples of exclusively attributive adjectives and counterevidence to adopting Chomsky's proposal for other languages as well as for English. In Polish, adjectives *lewy* (left) and *prawy* (right) cannot appear in predicative position in simple statements but they are acceptable in the predicates of direct and reported questions, cf.:

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[1] I am grateful to doc. dr hab. Ruta Nagucka and doc. dr hab. Krystyna Pisarkowa for their valuable criticism and comments on an earlier version of this paper. I have also considered suggestions made to me by Prof. dr Kazimierz Polański, who, however, does not agree with the final conclusions made here.

Polish	*English*
1. prawa strona	right side
a. * Ta strona materiału jest prawa	* This side of the material is right.
b. Która strona materiału jest prawa?	* Which side of the material is right?
c. Jaśniejszy kolor wskaże pani, która strona jest prawa.	* This lighter colour will tell you which side is right.
2. lewa narta	* the left ski
a. * Ta narta jest lewa.	* This ski is left.
b. Która narta jest lewa a która prawa?	* Which ski is left and which is is right?
c. Przy pomocy oznaczeń "L" i "P" można poznać, która narta jest lewa, a która prawa.	* By means of the letter marks "L" and "R" one can tell which ski is left and which is right.

Both in Polish and English, however, adjectives *left* and *right* cannot be modified by means of "very" nor can they be used in structures of comparison, which follows from the semantics of these adjectives, cf.:

3. * a very left hand — * bardzo lewa ręka
4. * Is this glove more right than left?
 * Czy ta rękawiczka jest bardziej prawa niż lewa?

Semantically, adjectives *left* and *right* are usually classed together with other "spatial" adjectives such as *wide*, *long*, *tall*, etc. (the term "spatial" adjectives being introduced by Bierwisch (1967:11), which are used to describe the position and orientation in space of the objects referred to by the nouns they modify. Bierwisch mentions the fact that spatial adjectives are syncategorematic, i.e., that they do not have autonomous meaning when considered in isolation. It will be observed in this paper that even the meaning of full NP's containing prenominal*left/right* adjective and a head noun often cannot be determined without reference to external factors such as the position of some other objects or that of the speaker at the time of the speech act. Adjectives *left* and *right* seem to present semantic problems which cannot be solved without recourse to semantic pragmatics.

When considered from the point of view of their referents in reality, NP's containing prenominal adjectives *left* or *right* fall into two distinct groups:

a. a group of NP's denoting objects permanently oriented which can be considered in isolation and will always be recognized as either left or right, e.g. *a left glove, a left-hand screw*, etc.

b. a group of NP's denoting objects which are not permanently oriented, i.e., they do not possess any inherent feature in their structure that would make it possible to mark them unanimously as either left or right when they are considered in isolation. These objects are described as *left* or *right* only with respect to some plane of reference provided by other objects or human beings definitely oriented towards the objects in question at the time of the speech act, e.g. *the left side of a street, the left windscreen wiper of a car*, etc.

Objects denoted by NP's of group a) are different in nature from objects denoted by NP's of group b). They can be thought of as single entities, existing by themselves, because in their shape they possess some inherent feature which makes it possible to define them as *left* or *right* without necessarily relating them to other objects, and they cannot lose or change their property of being left or right. E.g., a left glove will never become a right glove and will always be referred to as *left*, even if it is put on the right hand, whereas an object such as a left wheel of the car will be called *a right wheel* when it changes its position in space through being fixed on the right side of the car, although physically, it will remain the same object. Objects denoted by NP's of group b) do not have any inherent property that would mark them as uniquely *left* or *right*; they acquire their left or right status when their position is fixed with respect to some external plane of reference. A windscreen wiper becomes left or right when it is fixed to the car, a drawer becomes left or right when it is put into a desk with two sets of drawers; even such common expression as *the left eye* has meaning only when understood as a part of a human face with the nose providing the vertical orientation and the necessary plane of reference. (In a description of a modern painting representing a human face with two or more eyes painted on one side of the nose one would speak of two left or two right eyes).

The difference between the two kinds of objects denoted by NP's containing adjectives *left* and *right* finds a linguistic manifestation in English and in Polish. Cf. the behaviour of these NP's in sentences a) and b) in the following set of examples:

5. a) I have found *some/a left shoe.*
Znalazłem *jakiś lewy but*[2].
b) *I have found *some/a left wheel.*
*Znalazłem *jakieś lewe koło.*

6. a) What does *a left glove* look like?
Jak wygląda *lewa rękawiczka?*
b) *What does *a left sock* look like?
*Jak wygląda *lewa skarpetka?*

7. a) Draw *a left hand.*
Narysuj *lewą rękę.*

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[2] The figurative meaning of *lewy* as *not good* is disregarded in this part of the paper.

b) *Draw *a left stocking*.
*Narysuj *lewą pończochę*.

8. a) **A right shoe* and *a left shoe* are identical.
**Prawy but* i *lewy but* są jednakowe.

b) *A right drawer* and *a left drawer* are identical.
Prawa szuflada i *lewa szuflada* są jednakowe.

In examples 5–7 sentences b) are definitely unacceptable whereas sentences a) are grammatical; in 8, sentence a) is false and sentence b) is true. Example 5 b) is ungrammatical because *a left wheel* does not have a referent in reality; the question in 6 b) cannot be answered because a specific description of an object called *a left sock* cannot be given, so this sentence does not make sense in a conversation. Similarly, the order given in 7 b) cannot be carried out for isolated objects such as left stockings do not exist and cannot be easily imagined since in our reality all stockings of a given size are identical. (Whereas shoes and gloves are sold only in pairs, one can buy more than two stockings of a given size — usually three are sold at a time[3]). We speak of left wheels, socks, stockings or drawers when the existence of corresponding right wheels, socks, stockings or drawers is presupposed, and it is clearly not presupposed in sentences 5–7. Objects denoted by NP's in examples a) of these sentences (a left glove, a left hand, a left sock) can be thought of as isolated entities and the existence of the corresponding right objects of their kind does not have to be presupposed when these NP's are used in English or Polish sentences

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[3] It may be noticed, however, that language users seem to assume, against common practice of buying more than two stockings at a time, that these articles are pairs, and the expressions *a pair of stockings* and the corresponding *para pończoch* are commonly used in English and in Polish. This fact can be explained as an unconscious use of analogy to "logical" NP's such as *a pair of shoes*, *a pair of gloves*, *a pair of slippers*, etc. Another interesting fact may be mentioned at this point: in most cases both in English and in Polish, the noun *pair* is used in reference to articles of clothing for various symmetrical body parts but not in reference to these body parts themselves (except in some figurative meanings), cf.:

a)	a pair of shoes	—	para butów	
	socks		skarpet	
	stockings		pończoch	
	gloves		rękawiczek	
b)	* a pair of feet	—*	para stóp	
	legs		nóg	
	hands		rąk	
	ears		uszu	(except in literary phrases such as *para nóg do tańca* *para rąk do pracy*)

since single objects such as the left glove of example 5 a) will always have references in reality[4].

Another linguistic observation reflecting the difference between objects denoted by NP's of group a) and those denoted by NP's of group b) can be made at this point. NP's of group a) have the structure Adj-N, whereas NP's of group b) usually contain structures of modification to accompany Adj-N phrases. In English they are most frequently *of*-NP structures of modification, in Polish — nominal modifiers in the Genitive case. Cf.:

9. *Adj-N+a structure of modification*
the left windscreen wiper *of a car* — lewa wycieraczka *samochodu*
a left drawer *of a desk* — lewa szuflada *biurka*
the left arm *of an armchair* — lewa poręcz *fotela*
the left wall *of a room* — lewa ściana *pokoju*
the left bank *of a river* — lewy brzeg *rzeki*

10. *Adj-N+Ø*
a left shoe — lewy but
a left hand — lewa ręka
a left boot — lewy "kozak"
a left car — lewe ucho

It should be further observed that the noun in the structures of modification refers to a definite object in reality (whether specific or understood as a representative of a class of objects), and therefore it is often preceded by the definite article, a possessive pronoun with a definite deictic function or a proper noun in the Genitive in English. The English *of*-NP structures under consideration cannot be translated into Polish by means of a postnominal adjective. The NP **a left wheel of a car* and its Polish equivalent **lewe kolo samochodowe* are unacceptable because the structure of modification here describes a type of wheel, suitable for a car, and the NP does not presuppose the existence, of a definite car the left wheel in question could be a part of. The impossibility of the post-adjectival translation into Polish of the *of*-NP phrases here as well as the lack of NP's such as **a left car wheel* in English seem to argue for the necessary definiteness of the terms used in the structures of modification accompanying *left/right*-N phrases under discussion. The NP's *one of the left wheels of John's car* and the corresponding *któreś lewe kolo samochodu Jana* are acceptable since they have a definite referent in reality because the presence of the proper name *John* restricts the denotation of the whole expression to one concrete object.

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[4] Fillmore (1968:63) mentions an interesting case reported by Lévy-Bruhl of a language in which there is a clear referential and grammatical distinction between NP's *a left hand* and *a hand*. The former denotes the part of human body whereas the latter does not. This semantic difference is manifested in different grammatical functions of the two expressions.

Objects denoted by the nouns in the structures of modification accompanying NP's of group b) provide the necessary plane of reference with respect to which objects referred to by the head nouns of the NP's in question can be described as *left* or *right*. No reference to objects other than those denoted by the head nouns is necessary in a semantic description of NP's of group a). Besides this referential difference there seems to be an important physical difference concerning the shape of objects denoted by the head nouns of the NP's of the two groups. Objects denoted by NP's of group a) are irregular in shape, i.e., they do not have an axis or a plane of symmetry of their own, whereas objects referred to by the head nouns of NP's of group b) are very regular in their shape and in geometrical terms can be defined as symmetrical since they possess an axis or plane of symmetry of their own. Taking these physical features of structure into consideration as a criterion, objects denoted by NP's of group a) can be defined as a subset A of all objects which can be referred to as *left* or *right*, such that the elements of A possess in their shape an inherent and permanent property which can unanimously mark them as *left* or *right*. The meaning of adjectives *left* and *right* used to describe NP's which denote elements of A (e.g. a left glove) can be defined in terms of logic as the property of being left or right. Objects denoted by NP's of group b) cannot be described as inherently *left* or *right* because of the geometrical regularity in their shape. Adjectives *left* and *right* in these NP's do not define a property of the objects denoted by the head nouns of these NP's. Their meaning depends on the presence of some other objects with respect to which objects denoted by the head nouns in question can be characterized as left or right, i.e., can be described as left or right oriented in space. Their semantic function is not to describe the object denoted by the following noun but to orient this object in space with respect to a plane reference outside it. All *left* and *right* adjectives which are not used to specify elements of the set A have this orientative function.

Since the function of adjectives *left* and *right* is clearly different in the two groups of NP's discussed so far, I would like to suggest in this paper that there are two kinds of the *left/right* adjectives: the specifying and the orientative type. To account for the distinctions between them the lexicon of English and Polish should provide double semantic entries for the pair *left* and *right* and the grammars of these two languages should consider semantic and syntactic differences between NP's containing adjectives *left* and *right* of one or the other type.

To my knowledge, only two proposals concerning a semantic treatment of adjectives *left* and *right* in the grammar have been advanced so far: one by Bierwisch (1967) and the other by Fillmore (1971), both very tentative and general. Neither of the two linguists considered the distinction between the two types of the *left/right* adjectives made in this paper. Bierwisch proposed a description of the features of some spatial adjectives from German in terms of a system of universal semantics markers. His approach was a continuation and development of the interpretive type of semantics proposed by Katz and Postal has been since much criticized. (1964) whose theory (David Lewis (1972:169) sums up current opinions on the Katzian method of semantic interpretation by calling Katz and Postal conception of semantic markers "nothing more than a translation into the auxiliary language of Semantic Markers"). Bierwisch's system of universal semantic markers for orientative features of spatial adjectives turned out to be extremely complicated and inadequate, and that may be the reason why the work he started in this field has never been successfully developed. In 1971 Charles Fillmore returned to Bierwisch's proposal for handling semantic implications of spatial adjectives in terms of features and suggested that the features connected with the dimensionality and orientation of objects in space should be stated in the lexicon as information provided by spatial adjectives such as *wide, tall, left*. In his proposal orientative features should be incorporated into the presuppositional component of the lexical entries for spatial adjectives, cf.:

> "Uses of the word *wide* presuppose that the object being referred to has at least one (typically) horizontal dimension; and that the dimension which this word is used to quantify or describe is either the main left-to-right extent of the object as human beings conceive their orientation to it, if that is fixed, or it is the shorter of the two horizontal dimensions. The adjectives *tall* and *short* (in one sense) presuppose, as *high* and *low* do not, that the object spoken about is vertically oriented and is in contact with, or is a projection out of, the ground". (Fillmore 1971: 384).

Unfortunately, Fillmore did not discuss the question of lexical presupposition in much detail and no more spatial adjective examples were considered in his paper.

With *left* and *right* a specification of their presuppositional component is more complicated than with adjectives like *wide* and *tall*. First of all, it is more difficult to define the object "being referred to " by adjectives *left* and *right* used in nominal phrases. Whereas in the case of NP's containing adjectives such as *wide, tall* and *short* the object "spoken about" is always the object denoted by the noun these adjectives modify, in NP's containing adjectives *left* and *right* grammatical surface structure reference does not always parallel semantic reference. Lexical items *wide, tall, short* in NP's *a wide bed, a tall boy, a short dress* presuppose some definite horizontal and vertical dimensions of the objects referred to by the nouns they describe, i.e., the bed, the boy, and the dress respectively. In NP's containing orientative *left* and *right* adjectives horizontal and vertical dimensions are presupposed for objects different from those denoted by the head nouns of these NP's. Examples 11–13 require a consideration of horizontal and vertical orientations of the car, the sofa, and the human face, not the wheel, the arm or the eye, cf.:

11. The front *left wheel of my car* needs checking.
12. You will find the money in *the left drawer of his desk*.
13. The man you have drawn has two *left eyes*.

In example 11 a specification of horizontal and vertical dimensions of a wheel, which is the object denoted by the head noun, is not possible at all for we do not speak of definitely fixed front and back or top and bottom parts of a wheel, even when it is in motion. In NP's of examples 12 and 13 it is possible to talk about recognized basic front/back and up/down orientations of a drawer or an eye but this information is not relevant for the interpretation of these NP's. A specification of vertical and horizontal dimensions of a drawer or an eye does not provide sufficient information for a description of these objects as *the left drawer* and *the left eye*. In the interpretation of examples 11–13 it is necessary to consider horizontal and vertical orientations of the objects spatially related to the objects denoted by the head nouns of these NP's, i.e., the objects denoted by the nouns in the following (11, 12) or possible (13) *of*-NP's. The relation between the two objects is such that the objects to which dimensional presuppositions of the lexical items *left* and *right* apply, contain, i.e., have as their proper parts, the objects denoted by the head nouns of NP's in question, i.e., a left wheel is an inalienable part of a car, a left drawer is an inalienable part of a desk, and a left eye has to be considered as a part of a human face.

It is relatively easy to interpret relevant dimensions of objects such as cars or desks since both English and Polish have set expressions to denote front and back parts of objects of everyday use such as vehicles and pieces of furniture, cf.:

14. Notice the $\begin{Bmatrix}\text{back}\\ \text{front}\end{Bmatrix}$ of his car.
  — Zwróć uwagę na $\begin{Bmatrix}\text{tył}\\ \text{przód}\end{Bmatrix}$ jego samochodu.
15. He painted the $\begin{Bmatrix}\text{front}\\ \text{back}\end{Bmatrix}$ of his desk green.
  — Zamalował $\begin{Bmatrix}\text{tył}\\ \text{przód}\end{Bmatrix}$ biurka na zielono.

Objects in motion can be thought of in terms of fixed back-to-front orientations, their front being understood as the part which arrives earlier at any point along its path, and consequently, the left-to-right orientation of these objects can also be determined. Although we do not speak of fronts and backs of such moving objects as e.g. a river, NP ***the left/right bank of a river — prawy/lewy brzeg rzeki*** will be given a unanimous interpretation since the direction in which the river is moving defines its back-to-front dimensions[5].

Cars, desks and rivers are perceived in terms of their own, conventionally fixed left-to-right orientations but for objects such as streets, rooms, boxes (or virtually all single objects perceived by human beings) various left-to-right orientations are possible and the specification of left and right sides of these objects depends solely on the location of a human being watching them at the time of the speech act. For an interpretation of NP's such as *the left side of the street*, *the left wall of the room* or *the left page of the book* the presence of a human observer must be presupposed and it has to be assumed that the main horizontal and vertical dimensions of objects such as street, rooms and books are extensions of the up/down, front/back and left/right axes of the human observer. These orientations are fixed for the human beings and the objects which do not have basic orientations of their own acquire the orientations of the person watching them[6]. The left side of a street is in

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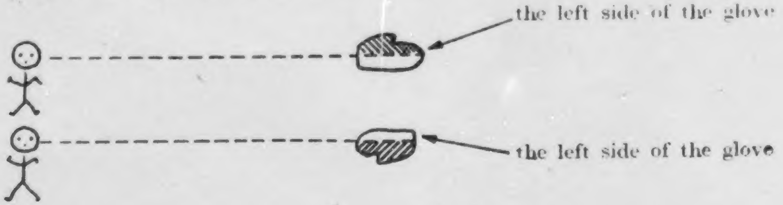
[5] In the case of objects which move forward performing circular movements at the same time, presupposing front/back orientations does not seem necessary since, by some sort of convention, the movement forward performed widdershins is called *the left-hand movement* (*ruch w lewo, niezgodny z ruchem wskazówek zegara* and the movement deasil is described as *the right-hand movement*) *ruch w prawo, zgodny z ruchem wskazówek zegara*). Cf. such NP's as *the left-hand thread screw — lewoskrętna śruba, korkociąg*, and *the right-hand thread screw — prawoskrętna śruba, korkociąg*.

[6] It may be hypothesited that all objects which do not have front/back and up/down orientations of their own, or do not possess a plane of symmetry in their structure, acquire the axis of symmetry of the human viewer watching them at a given moment, and with respect to his axis of symmetry as their plane of reference they or their parts become *left* or *right* oriented; whatever falls to the left side in the range of the observer's vision at the given moment will be defined as *left*, and whatever falls to its right, as *right*. Any object which happens to be divided by the straight line which is an extension of the axis of symmetry in our range of perception can be described as having *left* and *right* sides but it should be remembered that these are not the *left/right* sides of this object in itself but what is by convention called *the left/right sides* of the object as perceived by the human observer. Objects denoted by specifying *left/right* adjectives do not have a plane of symmetry of their own and are not usually described as having *left or right sides* but one can use an NP such as e.g. *the left side of this glove* which will have to be interpreted with respect to the human observer whose axis of the range of his vision cuts across the glove providing the plane of symmetry with respect to which various parts of the glove can be called *right* or *left* depending on the position of the glove in space at the given moment, cf.,



fact the left side of the speaker standing in this street (and/or watching it), the left wall of the room is to the left of a man standing in this room, the left page of a book is invariably to the left of the human reader, even the lefthand traffic is defined with respect to the left side of a human being moving forward.

One might want to associate these remarks with an interesting linguistic fact observed in Old Polish, which had nominal derivatives from adjectives *left* and *right*. These abstract nouns, *lewica* and *prawica*, which denoted left and right sides/hands of a given object, always occurred with [+human] modifiers, cf.:

16. prawa strona/ręka ojca=prawica ojca
(as in "siedzi po prawicy ojca")[7]
(the right side/hand of the father)
17. prawa strona kościoła ≠ * prawica kościoła
(the right side of a church)

Polish abstract nouns derived from adjectives *left* and *right* cannot be paraphrased as Adj-N phrases in the way abstract nouns derived from other spatial adjectives can. Examples in 18 provide supporting evidence for my contention that *left* and *right* require separate treatment in the class of spatial adjectives, cf.:

18. a) lewica ojca — *lewy ojciec
the left side of the father — * the left father
b) szerokość rzeki — szeroka rzeka
the width of the river — the wide river

Another problem connected with an interpretation of NP's containing *left* and *right* adjectives is reflected in examples of 19:

19. a) the left side of a picture — lewa strona obrazka
the left drawer of a desk — lewa szuflada biurka
b) the left arm of the $\left\{\begin{matrix}\text{armchair}\\ \text{sofa}\end{matrix}\right\}$ — lewa poręcz $\left\{\begin{matrix}\text{kanapki}\\ \text{fotela}\end{matrix}\right\}$
the left wall of the room — lewa ściana pokoju

To understand these NP's a reference to the human being has to be made since the objects denoted by the head nouns of these NP's are all left-oriented with respect to the human being who either always uses them in a conventional way or is looking at them at the moment, but whereas in examples b) the human being, as the ultimate plane of reference, is thought of as positioned within the object referred to by the nouns in the *of*-phrases, in examples a) he is presupposed to assume the position outside the object. The fact that an object with a plane of symmetry and sides can be viewed from the outside or the inside influences the interpretation of the NP's denoting oriented parts of this object. Fillmore (1971) points out these interesting facts about the "inner" and "outer" orientation of the objects referred to by the adjectives *left* and *right* but he refuses to include this information into the lexicon as presuppositional facts about these adjectives. His suggestion is to leave this observation for encyclopedias and not include it in the dictionaries.

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[7] It should be remembered that *prawica* and *lewica* are anachronic in Modern Polish — they are used only in literary texts for special stylistic effects.

It seems impossible to specify the presuppositional component of *left* and *right* in an adequate way so as to account for all the facts discussed above and therefore Fillmore's (1971) proposal is not fully satisfactory.

Whereas the meaning of NP's containing specifying *left* and *right* adjectives can always be determined since the objects denoted by the head nouns of these NP's possess in their structure an inherent irregularity which makes it possible to define them as either *left* or *right* (which is following from an arbitrary decision of human beings who deal with these objects in some conventional way and describe them by applying the terms analogous to those used in denoting inalienable left and right oriented parts of their body), to interpret the meaning of NP's containing *left*/*right* adjectives recourse to context which provides a plane of reference is indispensable. In some cases the plane of reference is provided by the immediate context of the sentence if the referents of the relevant nouns or pronouns can be clearly determined, e.g.:

20. Mary found the money in the left pocket of *John's* coat.
    Marysia znalazła pieniądze w lewej kieszeni płaszcza *Jana*.
21. Where is *my* left sock?
    Gdzie jest *moja* lewa skarpetka?

In many cases, however, the referents of NP's containing orientative *left*/*right* adjectives cannot be determined without the knowledge of the speaker's location and his orientation towards the object denoted by the modified noun at the time when the speech act is performed. The location and orientation in space of the participants in the conversation is absolutely essential to an understanding of examples 22 and 23, cf.:

22. Hang this picture on the *left* wall.
    Powieś ten obraz na *lewej* ścianie.
23. Will she put the vase on the *left* side of the table?
    Czy ona postawi ten wazon po *lewej* stronie stołu?

The use of *left* in 22 and 23 is a perfect example of what Fillmore (1973:1) calls "deictic function of linguistic material" since the adjective here relates the object to the observer's point of view assuming his conception of space. In a series of recent lectures on "Place, space and time" Fillmore (1973) discusses various ways in which natural languages reflect what is called "deictic anchorage of sentences", i.e., "an understanding of the roles sentences can serve in social situations occurring in space and time" (1973a:1). He believes that "principles of linguistic description should be geared in some way to deictically anchored sentences" (Fillmore 1973:16) and that this programme can be realized in the generative semantics framework.

Since a linguistic theory accounting for deictic conceptions of place, time and space of the speech act has not been formulated yet, the problem of the deictic function of orientative *left/right* adjectives seems to belong to the province of semantic pragmatics, which concerns itself with "the study of linguistic acts and contexts in which they are performed" (the definition given by Stalnaker 1972:380). Orientative adjectives *left* and *right* in relevant NP's like those in 22 and 23 should be included in the class of recognized indexical expressions, such as personal pronouns *I* and *you*, tenses, etc., as their reference and, consequently, the reference of NP's in which they occur, cannot be determined without the knowledge of the context of use[8]. Indexical expressions are typical instances of problems which should be solved in semantic pragmatics. In a paper presented at the 1973 Texas Conference on Presupposition Stalnaker argued for a separation of semantic and pragmatic presupposition. It is his contention that certain types of presupposition should be ascribed to people, not sentences, and that these pragmatic presuppositions make it impossible to dispense with presuppositional component in the lexicon. In view of the difficulties connected with the specification of the presuppositional component for *left* and *right* as lexical entries, it seems reasonable for an economical account of NP's containing adjectives *left* and *right* to repeat after Stalnaker (1973:13) that since these NP's are used in a conversation they "make sense only as a sequence of rational actions on the assumption that the speaker and the hearer share certain presuppositions". These presuppositions are not properties of the adjectives in NP's considered, but "the properties of conversations in which these expressions are used. They are different in different contexts of conversation and are determined by general conversational rules". This solution may not be absolutely satisfactory but at the present stage of development of pragmatics has to be accepted.

A summary of the main points I have been trying to make about the semantics of adjectives *left* and *right* is in order. I have claimed that there are two kinds of spatial *left/right* adjectives: a) specifying adjectives which modify nouns denoting objects of irregular shape with no plane of symmetry of their own, and b) orientative adjectives which modify nouns denoting objects regular in shape with a plane of symmetry of their own. The function of specifying *left/right* adjectives is to denote the inherent property of being left or right of the objects denoted by the nouns they modify, whereas orientative *left/right* adjectives are used to orient the objects denoted by their head nouns in space, with respect to the planes of symmetry of other, bigger objects which "contain", i.e., have as their proper parts, the objects in question or/and the human beings viewing the objects in question from the outside or the inside of the "containing" objects. I have observed that NP's containing *left/right* adjectives of the specifying type do not have to presuppose the existence of other related objects in space, whereas for an interpretation of NP's containing orientative *left/right* adjectives such a presupposition is a condition sine qua non. These facts about adjectives *left* and *right* are reflected in the linguistic behaviour of NP's in which they occur. In NP's with the specifying adjectives, head nouns are not further modified by other nominal structures whereas in NP's with orientative *left/right* adjectives additional modification (often by means of an *of*-phrase in English and a noun in the Genitive in Polish) is necessary, except in some frequently used expressions which can delete the *of*-phrase structure of modification but the presence of the referent of the deleted noun has to be presupposed, e.g. *the left eye=the left eye of/in a face.*

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[8] The term "indexical expression" is ascribed to Bar-Hillel. Other philosophers, when referring to indexicals use various terms, e.g. Russell calls them "egocentric particulars", Reichenbach — "token-reflexive expressions", Goodman — "indication words". For a discussion see Montague, R. (1972).

The distinction between the two types of *left/right* adjectives is important for Fillmore's (1971) proposal to handle semantic implications of *left* and *right* in the presuppositional component of the lexical entries for these adjectives, because it allows us to limit to the orientative type the class of *left/right* adjectives which require lexical presupposition. I have further observed that in many cases orientative *left* and *right* become indexical expressions and that problems connected with their interpretation are subject proper of semantic pragmatics. I have suggested that they would be best treated in terms of pragmatic presupposition which, according to a recent proposal by Stalnaker (1973), substitutes lexical presupposition, and that all presuppositions involved in the use of adjectives *left* and *right* should be viewed as the property of a conversation carried out according to the natural rules of conversation (as specified by Grice 1968).

In a contrastive discussion of the semantic problems involved in the use of *left* and *right* the question of the universality of the notions expressed by these two adjectives should be considered with respect to spatial as well as figurative meanings of *left* and *right* in English and in Polish.

Bierwisch (1967), following the line of thought on semantics proposed by Katz and Postal, (1964), assumes the existence of a universal set of semantic primes from which inventories of primitive semantic elements are to be selected. As to the question of whether these primitive elements should be ascribed to people or to the surrounding objects, he adopts the point of view characteristic of the philosophical school of conceptualism, cf.:

> "There are good reasons to believe that semantic markers in an adequate description of a natural language do not represent properties of the surrounding world in the broadest sense, but rather certain deep seated, innate properties of the human organism and the perceptual apparatus, properties which determine the way in which the universe is conceived, adapted, and worked on" (Bierwisch 1967: 3).

Later in his paper, however, he describes the universality of semantic markers as "not a theoretical accident but a constitutive fact of human speech, of the capacity that de Saussure called *language*" (Bierwisch 1967:4). This view enables him to discuss certain relations between objects and the human beings that deal with these objects in terms of semantic properties of words. He believes that the relation of language and thought, i.e., "the necessary set of semantic primes and its interpretation from our point of view" "is not a matter of a priori speculation but... may be approached only by tentative analysis of different languages" (Bierwisch 1967: 35). Bierwisch suggests the following "heuristic principle" for carrying out semantic analyses of expressions of language:

> "A semantic analysis of a lexical item is finished only if it leads to a combination of basic elements that are true candidates for the universal set of semantic markers, i.e., that may be interpreted in terms of basic dimensions of the human apperceptive apparatus" (Bierwisch 1967:37).

The semantic analysis of the adjectives *left* and *right* attempted in this paper on the material from English and Polish may be taken to suggest that the notion of left-right orientation is universal and thus should find some reflection in all languages. In Polish and English it happens to be rendered by means of adjectives (*left*/*right* in English and *lewy*/*prawy* in Polish) which may be explained as a consequence of common membership of these two languages in the Indo-European family, and when viewed from a wider perspective, a reflection of the similarity of cultures these two languages represent.

Fillmore believes in the universality of certain notions of spatial orientation. In his lecture on "Space" he explains this universal fact which finds reflection in "all the well known languages on this earth" as a consequence of the definite biological structure of human beings who "all have semi-circular canals in their inner ears and therefore perceive this world in terms of the vertical up/down orientation determined by the direction of the gravitational forces, and two horizontal axes: front/back and left/right, the former determined by the location of the organs of perception in animals and the direction of movement for all other objects in motion, and the latter, left/right orientation, being fixed for all human beings, and then, by analogy, applied to other sorts of objects which have the requisite up/down and front/back orientations" (Fillmore 1973a: 6). This last explanation is convincing to the extent that the objects considered can move and/or see and we can speak of their left and right sides but it does not account for such linguistic facts discussed in the first part of this paper as ***the left/right wall of a room*** or ***the left/right side of a street***, for an interpretation of which the knowledge of the orientation of the speaker and viewer at the time of the speech act is indispensable, nor does it explain why asymmetrical enantiomorphic objects such as left and right gloves are also described by means of ***left*** and ***right*** though they do not have "the requisite up/down and front /back orientations".

Asymmetrical structure of the human body with the heart located in one of its two otherwise practically symmetrical parts allowed human beings to define the heart-containing part of the body arbitrarily as ***left*** and thus, "fix" (to use Fillmore's (1973:6) term) the left/right orientation for the humans on the basis of the anomaly in the structure of their organisms. It should be kept in mind, however, that this asymmetry is neither visible nor obvious and therefore, perhaps, the concepts of ***left*** and ***right*** are learned only by demonstration and practice. It can be commonly observed that little children do not know which is their left hand and which is the right one until they have come to associate the term ***right hand*** with the actions they are trained to perform with this hand. The contexts in which a child learns the meaning of the adjectives ***left*** and ***right*** are most frequently provided by such familiar childhood imperatives as: *Jedz prawą rączką* (Eat with your right hand), *Przeżegnaj się prawą rączką* (Make the sign of cross with the right hand), *Nie pisz lewą rączką* (Don't write with your left hand), etc. Fillmore (1973a: 6) notices that there are people who never succeed in learning the distinction between the notions of ***left*** and ***right***.

In view of these observations the question of why the speakers of various languages use the spatial terms ***left*** and ***right*** in the same way is extremely puzzling. The fact that, to my knowledge, there is not a single example of ***left***-Noun in English that would correspond to ***prawy***-Noun in Polish may be explained by the similarity of the two cultures represented by two languages of the same family, but why should this correspondence be observed in totally unrelated languages, even when figurative meanings of these adjectives are considered? In a paper at the seventh meeting of the Chicago Linguistic Society in 1971, M. Durbin quoted an interesting fact that the meanings of the English adjective ***right***: a) ***right*** as in ***the right hand***, and b) ***right*** as ***correct*** correspond to and are also semantically related in a genetically unrelated language, Yucatec Maya, where the word ***no'oh - right*** has the two meanings: a) as in ***the right hand*** and b) ***correct*** (Durbin 1971: 351)[9].

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[9] In mathematics one of the unsolved problems of communication known as the "Ozm's problem" consists in the impossibility of giving a strictly unanimous definition

Defining the terms *left* and *right* not all languages rely on the anomaly in the structure of the human bodies. Fillmore (1973:6) quotes a Chinese dictionary definition of *left* and *right*, where *left* is defined simply as the opposite of *right*, and *right* as the opposite of *left*. Polish dictionaries, but not the English ones, introduce *left* as the basic concept in the *left-right* pair, *right* being defined as the opposite of *left*. In physics and biology *left* also seems to be the basic orientation. In physics, the structure of a magnetic field is a typical instance of asymmetry since a compass needle when put under a conductor with a flowing stream of electric current will always move to the left in the direction of the North Pole, and not once to the left, once to the right as might have been expected; this physical law is known as the principle of the left hand (cf. also the principle of the left-hand thread screw). In biology, the particles of all proteins have been described as asymmetrical and left-oriented since they contain only the left form of various compounds of carbon[10].

In a paper "On the semantic structure of English adjectives" Givon (1970:817) provides linguistic evidence to the effect that "two membres of an adjective pair share a basic quality, though they are somehow differently oriented with respect to that shared quality". He considers pairs of adjectives of measure such as *big-small*, *short-long*, etc. and observes that *one* member of the pair "seems to always function as the UNMARKED of generic cover-term for the common quality involved in both members" (1970:817). His evidence is partially taken from Vendler (1968), who observed that questions like: *How big is it*? may be answered by *It's very big* or *It's very small*, while questions like *How small is it*? may only be answered by *It's very small*, never by **It's very big*. Givon claims that members of all adjective pairs are NEGATIVELY RELATED and proposes a negative pairing test to show it. Adjectives *left* and *right* do constitute an obvious pair but the specification of the quality they are supposed to share, according to Givon, is a very difficult task since in their orientative meaning, they do not indicate a quality of the objects referred to as *left* or *right*. There are no abstract terms in English to define "leftness" or "rightness" of an object[11].

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of *left* and *right*. The problem was clearly formulated in 1961 (though it was earlied pointed out by Kant) when the Danish mathematician Hans Freudenthal attemptesr to construct a logical language "Lincos" (in the work called *Design of a language for cosmic intercourse*) which would be a system of communication with intelligent beings from outside our galaxy. He found it absolutely impossible to communicate the notion of *left* and *right* to the beings who are are not constructed like the humans. The discussion of the problem and its consequences is given in Gardner, M (1969: chs. 18, 25).

[10] For more examples of asymmetry and enantiomorphism in nature see Gardner (1969:chs. 6–16).

[11] It should be mentioned here that *A new English dictionary on historical prin-*

Still, Givon's (1970) negative pairing test applied to the *left/right* pair suggests that these two adjectives are negatively related, although in their primary, spatial sense no overt negative marker is present in either member of the pair, i.e., to describe orientation in space English and Polish do not employ adjectives such as **unleft*, **unright*, **nielewy*, **nieprawy*, cf.:

24. a) John has only his *right* shoe and Mary does not have her
*right either
left *right*
* *left*

b) Jan ma tylko prawy but a i Maria nie ma *lewego* buta.
**prawego*
lewy *prawego*
**lewego*

The question of which of the two members of the pair is the one incorporating the negative marker seems impossible to be solved on purely syntactic grounds. In the pair *long-short* we may speak of the *length* of objects rather than their *shortness*, cf. *What's the length of the table?*, not **What's the shortness of the table?*, also *The pencil is 5 centimeters long*, not **The pencil is 5 centimeters short* (when the length of the pencil in its positive sense is meant), and these facts make it possible to define *short* as the negatively marked, non-generic member of the pair, whereas a similar test is not possible in the case of the spatial *left-right* pair of adjectives.

Docent Pisarkowa has pointed out to me that in Polish in the opposition *left/right=lewy/prawy*, *left=lewy* is clearly the negatively marked member since it denotes the back or wrong side when the two adjectives are used in reference to the sides of material, while *right=prawy* remains neutral denoting the neutral side, the one naturally turned towards the viewer. In Polish there are two expressions to describe the action of inverting or remaking a garment so that the inner (lewy) surface becomes the outer (prawy) surface: the infinitive *przenicować* (turn) and the more colloquial phrase: *przewrócić na lewą stronę* (turn to the left side), cf.:

25. a) Znowu włożyłeś podkoszulek na *lewą* stronę
**prawą*

b) You've put your vest on *inside out* again.
**inside in*

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ciples (Bradley 1903) lists the abstract noun *leftness* defining it as "the condition of being on the left". The word was used by W. James in 1887:

> "*Rightness* and *leftness*, *upness* and *downness*, are again pure sensations differing specifically from each other"

The words are not given in dictionaries of current English.

The expression *włożyć/przewrócić co na prawą. stronę* (turn something to the right side, put it on inside in) is possible but the implication *turn it BACK to the right side, put it on the right way again* is always present in sentences containing the phrase. In neutral, unemphatic situations the VP *włożyć co na prawą stronę* is not used since the phrase *włożyć coś na siebie* (to put something on) really implies *to put something on the right way*, i.e., *inside in* (na prawą stronę) when the expression is used in reference to human garments[12].

Another linguistic and statistical argument for the markedness of *left* in oppoposition to the neutral status of *right* can be furnished when the occurrence of the terms used in reference to unequal skill with human beings use their hands is compared. Most people are more skillful and manipulative with their right hands[13], and those who prefer to use their left hands "stick out" in the society as "different, unnatural" (rightly or wrongly but such is still the popular opinion). Although two terms: *right-handed/praworęczny* and *left-handed/leworęczny* exist in English and in Polish, the latter is the marked one and naturally, has a much higher frequency of occurrence. This fact is certainly true about Polish, which according to Sławski (1971 : 190, 191), has at least six expressions to denote left-handed people: *leworęczny, mańkut, leworęki* (rare), *lewy* (dialectal), *lewak* and *lewic* (in the Kaszuby dialect), and only two used in reference to the right-handed people: *praworęczny* and *praworęki* (obsolete), both occurring very seldom.

Historically, English *left* derives from Middle English *left, lift, luft* with the original meaning of *weak, infirm, worthless* (Skeat 1901, Bradley 1903), later used to denote "the weaker hand and the left side", cf. ME *Lufthand, luft side, lift half, lifte schulder* (Bradley 1901). In Old English *left* was rare, the usual word being *winstre*, but corresponding terms such as OE *lēf* – *infirm, diseased*, and *gelēfed* — *weak, old* were used. In Anglo-Saxon *lyft-āld* denoted palsy. According to Webster, Walde connects OE *lēf* distantly with Latin *lētum* — death, and Greek *loimós* — pestilence, *līmos* — hunger, and Lithuanian *lesās* — thin. Bradley (1903) lists as corresponding terms *lēfung* — paralysis in OE and *gelêbōd* — lamed in OS, but to him their etymological connections with *left* are doubtful.

Polish *lewy* has never been used as a synonym of weak. According to Sławski

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[12] Fillmore (1971) observes that adjectives *left* and *right* are present in the surface structure only when there is a need to stress them (which seems to me to imply that they are not what Baker (1973:21), calls "epithetical adjectives" such as e.g. "*a racially superior Arian*". His example is:
(51) She slapped me with her left hand
where the verb *slap* normally has *hand* as an incorporated instrumental, unnecessary in the surface structure. In this example the instrumental *hand* is present only because it needs to be modified by *left* (Fillmore 1971: 380–381).

[13] For statistics and current explanations why this is so see Gardner (1969: 104–114).

(1971), *lewy*, noted in Polish in the fourteenth century, was first used as the Genitive of the nominal declension, and sometimes as the Locative, cf. *z lewa, na lewie* (on the left side). It was frequent in its figurative meanings of *illegal* and *wrong* (in Grzegorz from Żarnowiec, the sixteenth century, and in Pasek, the seventeenth century), also in reference to the back side of material. Today it is a synonym of *progressive, radical, revolutionary*. The word is present in all Slavic languages with the same meanings of *sinister, radical, not principal* (about the sides of material). It comes from Old Slavonic **lěvъ* — sinister, used figuratively in the negative meaning of *unjust, false, bad, not straight*. The IE form of the word is **laiųo* which probably meant *curved, not straight*. The root is found in some Lithuanian dialects as in *iš-laivóti* — to curve, to make turns, to swerve.

An interesting change of meanings can be observed when the original and the modern senses of *left* are compared in the two languages. In English, the original sense of *left* as *weak*, has completely disappeared and the later, directional sense has assumed its place. In Polish, the old figurative meaning of *lewy* as *bad and false* is becoming more and more popular in colloquial speech and slang.

The primary meaning of *right* (Anglo-Saxon *riht, ryht*, ME *riht*, Old High German *reht*) was *straight, erect, right*, cognate with Latin *rectus* and Greek *orektos*. In Modern English this meaning is obsolete, except in such frozen expressions as: *right line, right sailing, right angle*. According to Brückner (1970), Polish *prawy* comes from Old Church Slavonic with the primary meaning of *real, true, just, right*, cf., e.g., *z prawego łoża, prawy młodzieniec, prawy sędzia, prawica* (a virgin). The word is related to *prawda* (truth), *prawo* (law), *prawić* (to judge, to speak in an authoritative manner), obsolete *prawota* (justice). *Prawy* as the opposite of *lewy* came into use as a substitute form for an earlier word *dešin*, cognate with Lithuanian *deszinas*, Latin *dexter* and Greek *deksios* (cf. English *dextral*).

An examination of figurative meanings of *left* and *right* and the use of these two adjectives in idiomatic expressions in English and Polish reveal many interesting facts about the psychological attitude towards these two notions of the speakers of the two languages. In both English and Polish, when adjectives *left* and *right* become evaluative in their meanings *left* and *lewy* tend to denote negative qualities whereas *right* and *prawy* acquire clearly positive status. This parallelism can be observed when expressions connected with morganatic marriage are compared in the two languages. *Left* and *left-hand* are pejorative epithets in English phrases *to marry with the left hand, a daughter by the left hand* and correspondingly in Polish, where *lewy* is a synonym of *illegitimate*, cf. *ożenić się na lewą rękę, ślub z lewej ręki* (Doroszewski 1962), *dziecko z lewej ręki/strony* (Karłowicz, Kryński, Niedźwiedzki 1900), all three obsolete in Modern Polish. Out of some modern uses negative *left* in the following idioms can be quoted: *kupić/nabyć co z lewej ręki* (to buy something with the left hand, i.e., purchase from an illegal source), *wstać lewą nogą* (to get up with the left leg; an expression used as an explanation of somebody's low spirits or bad luck on a given day) (Skorupka et al. 1968). *Lewy* is often used as a synonym of *false* or *forged* in such NP's as: *lewy paszport*, *papiery*, *dokumenty*, *świadek* (left passport, papers, documents, witness), *lewe dochody* (unlawful income). In colloquial and slangy speech it means *no good*, *unattractive*, *uninteresting*, as in *lewy facet*, *film*, *babka*, *książka* (the left guy, film, chick, book). Expressions like the one in *Jan ma dwie lewe ręce* (John has two left hands) are used to stress subject's clumsiness. In English, *a left-handed compliment* is a compliment of doubtful sincerity, obsolete proverbial expressions like *to see with the left eye*, *to work with the left hand* imply inefficiency in performance, *to go over the left shoulder* meant *to be squandered* (Bradley 1903). *Left-hand(ed)* may occasionally mean fictitious, ill-omened. *Right* and *prawy* are positively marked in expressions such as: *John is my right hand on the farm — Jan to moja prawa ręka w gospodarstwie* in English and in Polish, also in the English: *This served him right*. *Right* is a synonym of such positive epithets as: *correct* and *just*, cf. *the right answer*, *the right man for the job*, *the right hand man* — as chief, indispensable assistant; in Polish *prawy* often denotes positive qualities of somebody's character and behaviour, thus being a synonym of *virtuous*, *noble*, *righteous*, *upright*, cf. *prawy człowiek* (a noble man), *iść prawą drogą — to keep in the right path*. There is another meaning of Polish *prawy* which corresponds to English *rightful*, *lawful*, cf., e.g., *prawy właściciel — the right owner*, *sąd prawy*, *prawe ustawy* (legal court, lawful bills).

In politics the adjectives *left* and *right* are used in both languages to denote the radical and the conservative political groups, respectively. In English the terms connected with political *left* are: *leftism* (n) — political views of the left, the *Left* (n) — the Left (Wing) of a party, *leftist* — a politician of the left, *left-winger* — a politician of extreme left; those connected with the traditional *right* are: *the Right* (*Wing*), *rightist* (n), — a member of the right wing, and *rightist* (adj) — of the right, as in *rightist sympathizers*. All these terms are stylistically neutral, whereas in Polish, some of the 'political' *left* and *right* expressions are stylistically marked, cf. *lewica* (leftism), *lewicowiec* (a leftist) are neutral but *lewak* (a person advocating the views of extreme left and demanding that they be realized independently of social and human considerations) is a pejorative expression, marked negatively along with its corresponding terms *lewactwo* (n) and *lewacki* (adj) (Skorupka et al. 1968). There is no corresponding positive term to denote the views of extreme right. The existing terms: *prawica* (the Right Wing), *prawicowiec* (the rightist), and *prawicowy* (rightist as an adjective) as in: *prawicowy dziennik*, *prawicowe poglądy* (the rightist journal, the rightist views), are considered neutral.

In the vocabulary of some sports and in the road traffic regulations *left* and *right* are unmarked in both languages, e.g., in boxing, a blow delivered with the right hand is called *the right hand* in English, and in Polish its technical name is modified by *prawy*, as in *prawy sierpowy*; in American baseball the left-hand part of the outfield, as viewed from the home plate, is called *the left field* and the players to the left and right of the catcher's area are referred to as *left* and *right fielder*, respectively. Polish terms used when talking about football are: *lewy/prawy obrońca, lewa/prawa obrona* and the adjectives *lewy/prawy* refer to the names and positions of players viewed from the position of the goalkeeper of their team.

In the vocabulary of traffic regulations expressions for *left and right hand traffic* (*ruch lewo i prawostronny*) exist in both languages, but there are grammatical differences in the use of terms referring to particular road signs, e.g. the sign *turn left/right* is an imperative S in English though in colloquial speech *to take a left/right turn* is used, whereas in Polish the direction to the left/right is always expressed adverbially, cf. *zakręt w lewo/prawo, skręcić/zakręcić w lewo/prawo*[14]. Neither *left* nor *right* are stylistically marked in the vocabulary of road traffic.

Bierwisch (1967) suggests that the minimum number of meanings of a given adjective is determined by the number of its possible antonyms, cf. the results of this test when applied to prenominal *left* and *right* in English and in Polish:

English		Polish	
right	— *left* (hand, blow)	*prawy*	— *lewy* (but, strona materiału),
	— *wrong* (side of material, answer)		— *nieprawy* (charakter, łoże)
		lewy	— prawy (ucho, wycieraczka)
left	— *right* (lung, pocket)		— *prawdziwy* (paszport, dowód)
			— *?nielewy* (as in: "Potrzeba byś chciał nielewym sercem i okiem czytać pisma święte" — Kryński et al. 1900)

The test shows that in Modern English *right* has two true meanings: a) the opposite of *left*, b) correct; in Polish *prawy* has two meanings too: a) the opposite of *lewy* and b) legitimate, righteous; *left* has only one meaning: the opposite of *right*, but *lewy* has three meanings: a) the opposite of *right*, b) not true, false, c) no good unwilling (obsolete). These are not all the meanings of the adjectives in question for there are meanings of *left* and *right* in both languages which cannot be described in terms of antonyms, e.g. *lewy film* but not

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[14] Doroszewski (1962) has a nominal compound entry for *a left turn* in Polish as *lewoskręt* (he quotes a newspaper line from 1955 when the word was used). I have never heard the word *lewoskręt* used and I feel doubtful about its position in the lexicon of Modern Polish.

prawy/nielewy film** in Polish and ***right angle but not ****wrong left angle***. The results of this test, however, are interesting from the contrastive analysis point of view. They suggest that Polish and English may be very different in the use of word negation. It seems that English does not form adjectival antonyms by means of negative prefixes as often as Polish which can be seen on the example of ***left/right*** pair and their antonyms[16]. They also show that there is no one-to-one lexical equivalence between the two languages in the use of ***right/left*** pair in its various meanings in reference to particular nouns, e.g. Polish ***lewy*** in ***lewa strona materiału*** (left side of material) corresponds to English ***wrong***, not ***left***.

Another interesting surface structure difference involving prenominal order of adjectives ***left*** and ***right*** in multiadjectival nominal phrases can be observed in the following examples:

English	Polish
$\begin{Bmatrix}\text{upper}\\ \text{lower}\end{Bmatrix}\begin{Bmatrix}\text{left}\\ \text{right}\end{Bmatrix}\text{ corner}$	$^{*}\begin{Bmatrix}\text{górny}\\ \text{dolny}\end{Bmatrix}\begin{Bmatrix}\text{lewy}\\ \text{prawy}\end{Bmatrix}\text{ róg}$
$^{*}\begin{Bmatrix}\text{left}\\ \text{right}\end{Bmatrix}\begin{Bmatrix}\text{upper}\\ \text{lower}\end{Bmatrix}\text{ corner}$	$\begin{Bmatrix}\text{lewy}\\ \text{prawy}\end{Bmatrix}\begin{Bmatrix}\text{górny}\\ \text{dolny}\end{Bmatrix}\text{ róg}$

It does not seem convincing that the difference in the order of prenominal ***left/right*** and ***upper/lower*** adjectives in Polish and English shows anything about the meaning of these adjectives and I do not believe that it might suggest a difference in the perception of the left/right and up/down orientations by the members of the two cultures represented by these two languages. The matter is purely syntactic and seems to follow from different surface structure constraints on the order of prenominal elements in Polish and English. In teaching the prenominal order of adjectives in English to the Polish students this pair of examples has to be pointed out as a possible source of errors due to native language interference.

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[16] Rich evidence to this effect is furnished by compound adjectives containing *lewy* and *prawy* as their first elements, cf.:

prawy — lewy *—* nieprawy*	*prawy — nieprawy* *—* lewy*
prawobrzeżny/lewobrzeżny dopływ	prawomocny/nieprawomocny wyrok
praworęczny/leworęczny człowiek	prawomyślny/nieprawomyślny obywatel
prawoskrętny/lewoskrętny korkociąg	praworządny/niepraworządny naród
prawostronny/lewostronny ruch	prawowierny/nieprawowierny katolik
	prawowity/nieprawowity król

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PRONOUNS AS ARTICLES?

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1. In an account of surface exponents of coreferentiality in Polish, indefinite and demonstrative pronouns are the most likely candidates to function in the way parallel to the English articles. The aim of the present paper is to examine, in the light of recent research on word order and sentence stress in Polish and in English, to what extent, if at all, pronouns in Polish can be treated as articles.

In 1968 Krystyna Pisarek wrote that "in Polish, where there are no articles nor explicit definiteness or the lack of it realized by morphological features, there are no pronouns which can be called definite. The opposition of definiteness to indefiniteness is expressed in a specific way: for example, by the opposition of a given pronoun to the lack of the pronoun. This is how I understand the sense of grammatical definiteness in Polish..." (1968 : 12) (translation into English is my own).

Discussing the demonstrative pronoun *ten* she says that the article-like function of it is clear in two cases:

a) in the substantivating function, as in

(1) Te najporządniejsze też robią w łazience bałagan.
(These tidiest (fem) also make in bathroom mess)

where the appearance of the pronoun *te* changes the adjective into a noun (in a way, it could be compared to *the poor* in English). However, the substantivating function of the pronoun in (1) is not so evident. The adjective will not change its noun-function if we omit the pronoun. It means that the pronoun is not necessary for an adjective to acquire the status of a noun.

b) with proper names, as in

(2) Byliśmy najpierw oglądać ten Erfurt.
(We went first to see this Erfurt)

Pisarek also writes that only in such adverbial phrases as *w tych dniach* (in these days), *tej niedzieli* (this Sunday), etc., is *ten* obligatory. She concludes that since all other occurrences of this pronoun are optional, the suspicion that *ten* may have an article-like function is unjustified.

2. In my paper on definiteness and indefiniteness of nouns in Polish and in English (Szwedek 1974a) I wrote that there are clear and well defined cases where the lack of the pronoun does not mark the noun as indefinite. I have tried to demonstrate this in a number of papers (Szwedek 1974 a, 1974 b, 1975, and in this volume) in which I have shown that coreferentiality and noncoreferentiality of nouns in Polish is inseparably connected with word order and the place of the sentence stress. If it can be shown that in some circumstances a pronoun is obligatory in that the meaning is changed if it is removed, it will mean that at least in some cases it functions as an article.

Consider, first, the following sequence (all examples must be read with a normal, nonemphatic intonation, unless indicated otherwise):

(3) Widziałem jak do pokoju wchodził mężczyzna.
(I saw as to room was coming in man)
(4) Kiedy wszedłem zobaczyłem, że mężczyzna stał przy oknie.
(When I entered I saw that man was standing by window)

There is no doubt that the second occurrence of the noun *mężczyzna* refers to the same person as the first one. We may, however, think of a situation in which we have not identified the man standing by the window with the same man we saw entering the room. According to what I wrote in my earlier papers (Szwedek 1975 and in this volume) we may, then, choose three ways for expressing this:

a) First, we may change the word order of (4), as in (5):

(3) Widziałem jak do pokoju wchodził mężczyzna.
(5) Kiedy wszedłem zobaczyłem, że przy oknie stał mężczyzna.

which signals that the noun under consideration in (5) is noncoreferential to the same noun in (3).

b) The second way is to change the place of the sentence stress. According to the rules formulated in Szwedek (in this volume), the sentence stress is put in sentence final position and/or on the indefinite noun if such is present. Thus we would have (5) again.

The fact that the sentence stress is placed on the last meaningful element in the sentence and that it falls on the noun interpreted as noncoreferential, keeps the word order fixed in a specific, well-defined way and makes a) and b) above inseparable.

Notice that any changes in the word order or the place of the sentence stress in (5) produce undesirable results. With the change of the word order we would get (4) discussed above, which excludes a noncoreferential interpretation of the noun under discussion. With a change of the sentence stress we would get (6) (considered as a sequence sentence to (3)):

(6) Kiedy wszedłem zobaczyłem, że *przy oknie* stał mężczyzna.

Because of the infrequent occurrence of structures of this type it may be difficult to interpret it correctly. It seems, however, that *mężczyzna* in (6) is coreferential to the same noun in (3).

c) The third way is to add a pronoun to the noun, as in (7) (as a sequence to (3)):

(7) Kiedy wszedłem zobaczyłem, że przy oknie stał jakiś mężczyzna.
(When I entered I saw that by window was standing some man)

Now the pronoun overtly signals noncoreferentiality of the noun in (7) with the noun in (3). If we change the word order as in (8):

(8) Kiedy wszedłem zobaczyłem, że jakiś mężczyzna stał przy oknie.

we will see that no change in the interpretation of coreferentiality follows. It must be most strongly emphasized at this point that whereas there is no difference in coreferentiality of the noun in (5) and (7) (which I repeat for convenience):

(5) Kiedy wszedłem zobaczyłem, że przy oknie stał mężczyzna.
(7) Kiedy wszedłem zobaczyłem, że przy oknie stał jakiś mężczyzna.

in that in both the noun is noncoreferential with the noun in (3) (thus the pronoun is optional), there is an essential difference between (4) and (8):

(4) Kiedy wszedłem zobaczyłem, że mężczyzna stał przy oknie.
(8) Kiedy wszedłem zobaczyłem, że jakiś mężczyzna stał przy oknie.

(8) is a possible sequence of (3) with the meaning of (5) (i.e., with a noncoreferential interpretation of the noun) only when the noun is preceded by the indefinite pronoun *jakiś*. Without that pronoun, as in (4), the noun is understood as coreferential to the noun in (3). We may conclude that in sentence initial position an indefinite pronoun is obligatory if the noun is to have a noncoreferential interpretation.

3. Consider, next, what can be changed in (4) on the condition that the coreferential interpretation of the noun is preserved. It has been demonstrated in Szwedek (1974a) and by (5) above that a change of the position of the noun from sentence initial to sentence final is followed by a change of the interpretation of coreferentiality of the shifted noun. Such a change of the position of the noun in (4) would yield (5), an impossible sequence sentence to (3)

if the nouns are to be interpreted as coreferential. Also a shift of the sentence stress from sentence final to sentence initial position, as in (9):

(9) Kiedy wszedłem zobaczyłem, że *mężczyzna* stał przy oknie.

results in a sentence that obviously carries a contrastive meaning.

It is only proper to say here that points 2a and 2b and what has just been said above show that word order and the sentence stress in Polish cannot even be given the freedom they were allowed in my earlier papers where I suggested that a stressed noun has a noncoreferential meaning and an unstressed noun a coreferential meaning, and that it is usually the case that a noncoreferential noun is put in sentence final position because the most frequent intonation pattern is such that places the sentence stress at the end of the contour. In view of (6) and (9) this position must be further restricted. It seems that the final position (as in (6)) is so predominantly associated with a noncoreferential interpretation that if we move the sentence stress from it, it is not immediately clear that the noun is coreferential. Also, when we move the noun AND the stress to the initial position, as in (9), the result is an emphatic reading rather than a normal noncoreferential one. It means that only the stress on the noun in sentence final position renders a clear noncoreferential reading, and the lack of the stress on the noun in the initial position a clear coreferential reading. Other cases seem to be either contrastive or at best ambiguous (if correct at all).

As has already been said, coreferentiality of the noun can be marked by a demonstrative pronoun, as in (10):

(10) Kiedy wszedłem zobaczyłem, że ten mężczyzna stał przy oknie.

(10) does not differ in coreferentiality from (4). Similarly as in the case of (7) and (8) we may, now, change the word order as in (11):

(11) Kiedy wszedłem zobaczyłem, że przy oknie stał ten mężczyzna.

Strange as this sentence may sound, it significantly differs from (5) in that in (5) the noun has a noncoreferential interpretation while in (11) the coreferentiality of the noun is marked by the pronoun. It proves that a definite pronoun is necessary before a noun in sentence final position if the noun is to be interpreted as coreferential to the noun in (3). The awkwardness of such sentences as (11) supports the point made above that word order has been allowed too much freedom and must further be restricted.

4. It would be interesting to see how English demonstrative pronouns and the definite article, and Polish demonstrative pronouns behave with respect to the sentence stress. Notice, first, that in the example (12):

(12) Give me (the, this, that) book.

each word may be stressed. In the following discussion we will ignore the sentence stress on *me* as it has no bearing on the problem dealt with here. Compare now the following three sentences:

(13) *Give* me the book.
(14) *Give* me this book.
(15) *Give* me that book.

all with the sentence stress on the verb. As has been demonstrated in Szwedek (in this volume), the normal sentence stress does not fall on a definite noun. In such a case the noun is interpreted as coreferential to some other noun mentioned before. Indeed, there is no doubt that the definite noun in (13)–(15) must be interpreted as coreferential to a noun mentioned before. What is most astonishing, however, is the fact that the demonstrative value of *this* and *that* is lost in (14) and (15), and the demonstrative pronouns express nothing more than the definite article.

Consider next the same structure with the sentence stress on *book*.

(16) Give me the *book*.
(17) Give me this *book*.
(18) Give me that *book*.

The noun in (16) can be interpreted in two ways:
a) as a "unique" noun (with the meaning: the Bible),
b) as contrasting, for example: the *book*, not the *hook*.
(17) and (18) seem to express contrast too, but I fail to imagine what context they could appear in.

The third set of examples is as interesting as the first one ((13)–(15)) and concerns the same structure with the sentence stress on the article and demonstrative pronouns.

(19) Give me *the* book.
(20) Give me *this* book.
(21) Give me *that* book

In (19) the noun has the meaning *book of books*. (20) and (21) are of greater importance because only here, when stressed, do they have a truly demonstrative meaning. This becomes particularly clear when we compare the third set of examples ((19)–(21)) with the first one ((13)–(15)).

In Polish, an article-less language, we can only compare the two demonstrative pronouns *ten* and *tamten*. As a frame we will take a structure similar to (12):

(22) Daj mi (tę, tamtą) książkę.
(Give me (this, that) book)

As in English, each element may bear the sentence stress. Again as in English we will disregard the stress on *mi* (which under stress has the form *mnie*) for the same reasons as in the English examples.

(23) *Daj* mi tę książkę.
(24) *Daj* mi tamtą książkę.

Also as for English, I feel there is no demonstrative meaning in the pronouns when they are unstressed. There may be a shade of "distance" implication in (24) but I am unable to substantiate this impression. Both, however, have a clearly coreferential meaning.

The second set consists of sentences with the stress on the noun:

(25) Daj mi tę *książkę*.
(26) Daj mi tamtą *książkę*.

(25) seems to carry a contrastive meaning (compare the English example (16) above). *Tę*, then, does not have a demonstrative meaning. I have been unable to find a context to which (26) could be a sequence sentence. In fact, I do not understand (26).

The third set of examples consists of sentences with the sentence stress on the pronoun:

(27) Daj mi *tę* książkę.
(28) Daj mi *tamtą* książkę.

And only when the demonstrative pronouns are stressed do the demonstrative value and the "distance" difference between them find full expression.

5. By way of conclusions let me repeat the main points of the present paper. I have tried to show that in Polish the demonstrative pronoun *ten* and the indefinite pronoun *jakiś* are obligatory in some cases depending on the word order and the place of the sentence stress, and therefore they function in a way similar to the English articles (this was exactly the situation in Old English). By analogy these pronouns spread from obligatory positions discussed above to other positions in the sentence producing such structures as, for example, *ten Erfurt* (*this Erfurt*).

I have also tried to show how the demonstrative and article-like meaning of the pronouns is dependent on the sentence stress. The interesting observation is that in both English and Polish, if unstressed, they lose the demonstrative value and retain the article function only.

Another interesting point is a certain parallelism in the meaning of personal pronouns (3 sg.) discussed in Szwedek (in this volume) and the demonstrative pronouns discussed above with respect to the sentence stress. If unstressed, both express textual coreferentiality (i.e., the referent must be mentioned earlier in the text), and if stressed, both go beyond the text or in the case of the personal pronouns beyond the immediate context. When stressed, they have an emphatic (contrastive) meaning and they specifically deny coreferentiality with the preceding noun or pronoun. All these meanings are in full agreement with the *new-given information* distinction as marked by the sentence stress. That is, when stressed, they are interpreted as referring to a new object (thus expressing selection from (contrast against) many other objects); when unstressed, they are understood as referring to an object already mentioned. It is clear that the role of the sentence stress in semantic interpretation has been underestimated and a complete description of it will require further detailed studies.

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SELECTED CONTRASTIVE FEATURES IN ENGLISH-POLISH GRAMMAR OF TRANSITIVE VERBS

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1.1. *Comparison of English and Polish Transitive Verbs within the Basic Set of Phrase-Structure Rules.*

The basic characteristic of either English or Polish transitive verbs is that they must be followed by various kinds of object complements. The complements should be either nouns or nominal phrases or clauses. In this paper, the verb-direct object syntactic connection is to serve as a model for the analytical procedure. To determine the position of the V_t class within the basic set of phrase-structure rules, the following base can be considered (Fowler 1971: 35; Polański 1966:109–122):

(1) (i) $S \rightarrow NP + PredP$

(ii) $PredP \rightarrow Aux + \begin{Bmatrix} V \\ VP \\ Adj \\ NP \end{Bmatrix}$

(iii) $NP \rightarrow Det + N$

(iv) $VP \rightarrow V + \begin{Bmatrix} NP \\ Adj \end{Bmatrix}$

The set of these rules points out that V_t class is generated by PS-rules (ii) and (iv) respectively. This observation enables us to say that the transitiveness of the verb is determined by the verb-phrase constituent of the Predicative Phrase:

(2) $VP \rightarrow V + NP$ (iv)

The position of the V_t+object connection in the immediate-constituent analysis is as follows:

(3) $((Det+N)+(Aux+(V+(Det+N))))$

The symbols exemplify the terminal string after a complete set of the basic PS-rules has been applied. The terminal string in view shows the underlying syntactic structure only in the most general terms and is, therefore, the string of utmost generality. This generality feature allows the insertion into the string (by means of substitution) of any lexical category or deictic feature regardless of whether the two latter ones are semantically motivated or not In this way, the generation of both "grammatical" and "ungrammatical" sentences is possible. According to the criterion of syntactic function and category, all the following sentences are correct:

(4) *Mary drank her mystification.
Mary wypiła swą mistyfikację.
*The soldiers eat the guns.
Żołnierze jedzą karabiny.
*The stone weighs its daughter.
Kamień waży swą córkę.
*Pens devour their antagonists.
Pióra pożerają swych antagonistów.
*Mary became a piece of cake.
Mary stała się kawałkiem ciasta.

All the above examples may serve as a proof that the supergeneral speciality of the symbolic part of TG (the application of PS-rules) contains no blocking device for rejecting the generation of semantically deviant sentences. This deficiency spreads on both English and Polish respectively, and thus refers to the English and Polish verb-direct object phrase, too. All these observations lead to the following general conclusions:

1) the contrastive confrontation of the English and Polish verb-direct object connection shows no contrastive features on the level of PS-rules application. Both syntactic functions (subject, verb, object) and syntactic categories (e.g. NP, V, Adj) as abstract symbols or conventional generalizing terms are equivalently applicable with respect to the two analysed language systems with no contrastive differentiation;

2) the terminal string is identical for the both considered language systems with its characteristic ability to produce semantically deviant sentences.

1.2. *Lexical Insertion and Its Influence on Contrastive Criterion of Generalization.*

The abstract output of the PS-rules appearing in the form of the terminal string of syntactic categories serves as an input for lexical insertion. Only such an insertion is in power to narrow the generalization criterion as a result of substitution of the abstract symbols by the lexical categories referring to various contextual situations. The lexical insertion, however, does not solve the problem of "grammaticality" vs. "ungrammaticality" of the derived sentences:

(5) a. Det+John+Aux+drink+Det+coffee
Det+John+Aux+pić+Det+kawa
b. *Det+pens+Aux+devour+Det+antagonists
Det+pióra+Aux+pożerać+Det+antagoniści

It should be mentioned now that if the terminal string (3) was the output of utmost generalization, the string (5) is not generalized ***enough*** to block the appearance of the semanctically lame sentences. Again, from the point of view of syntactic functions and categories both the sentences (5a, b) are correct though only the former one, (5a), is semantically acceptable. Then there must be some intermediate-stage device to stop the derivation of those syntactically correct but semantically deviant sentences. This means that before any lexical categories are substituted for their parallel syntactic category symbols, they should be appreciated from the point of view of the ***lexical features*** they bear. This is as good as saying that a set of distinctive lexical features sufficient to specify the distinctive properties of a given lexical category should be applied as a checking semantic criterion so that no deviances can pass through the device. In our case, the application of lexical features is to clear the ground for the generation of both syntactically and semantically justified verb-direct object connections. The point is, however, that within the group of verbs taking a noun phrase after them, some form the verb-direct object connections and some do not do it at all. The verb ***to weigh*** may serve here as a well-known example:

(6) a. This machine weighs two tons.
Ta maszyna waży dwie tony.
b. She weighs her husband.
Ona waży swego męża.

Though the terminal string resulting from the application of PS-rules is the same for both the sentences:

(7) Det+N+Aux+V+Det+N

the lexical-features specification differs fundamentally:

(8) $\left\{\begin{array}{l}\text{This machine weighs two tons.}\\ \text{Ta maszyna waży dwie tony.}\end{array}\right\}$

$$\text{Det}+\text{N}+\text{Aux}+\begin{bmatrix} +\text{V} \\ +\underline{\quad}\,\text{NP} \\ +\underline{\quad}\ [+\text{Unit of weight}] \\ -\text{Pass} \\ +[(\pm)\ \text{Animate}]\ \underline{\quad} \\ . \\ . \\ . \\ +\text{Fn} \end{bmatrix}+\text{Det}+\text{N}$$

(9) {Mary weighs her husband.
Mary waży swego męża.}

$$\text{Det}+\text{N}+\text{Aux}+\begin{bmatrix} +\text{V} \\ +\underline{\quad}\ \text{NP} \\ +\underline{\quad}\,[+\text{Concrete}] \\ +\text{Pass} \\ +\ [+\text{Human}]\ \underline{\quad} \\ . \\ . \\ . \\ +\text{Fn} \end{bmatrix}\ \text{Det}+\text{N}$$

Though the above lexical information refers to only one of the items of the string, namely to the verb, the latter's neighbourhood has been predominated by the set of contextual features (Allen and Buren 1972: 54). The presentation of that kind shows at a glance all the basic lexical restrictions for each lexical item in the string. Such contextual feature as [+——NP] is a basic one for the whole class of transitive verbs, eliminating at the same time the necessity of including a special "t" marker attached to the verb (V_t). As to the [(±) Pass] feature, it refers to the further division of the V_t class into its two major "allo" subclasses, that is, the "action" transitive verbs taking objects on the one hand, and the "description" transitive verbs on the other (Lester 1971 : 86; Jacobs and Rosenbaum 1968 : 63). The latter ones may be followed by either adjective or predicate nominals, but this sort of joining never results in the verb-object syntactic relation (*weigh, cost, have*) (Gleason 1965 : 307; Lester 1971 : 87).

Thus, the most characteristic property of the lexical-features procedure is that, owing to the adequately distributed lexical features, all the post-verbal, non-objectival constituents are blocked so that only the verbs taking the object may participate in the verb-direct object connection. In this way, the analyses (8) and (9) form, in fact, a set of input-output lexical restrictional rules which may be applicable in a syntactic–classification process. Now, if we refer the last mentioned observation to the whole set of PS-rules base, a simplified lexical specification within this basis will be as follows:

(10) a. PS–rule (ii)

PredP→Aux+V {Mary slept. / Mary spała.}

VP {This machine weighs two tons. / Ta maszyna waży dwie tony.}

{Mary weighs her husband. / Mary waży swego męża.}.

Adj {Mary is pretty. / Mary jest ładna.}

NP {John is a teacher. / John jest nauczycielem.}

b. PS–rule (iv)

VP→V+NP {This machine weighs two tons. / Ta maszyna waży dwie tony.}

{Mary weighs her husband. / Mary waży swego męża.}

{John became a teacher. / John został nauczycielem.}

Adj {John became rich. / John stał się bogaty.}

(11) PredP→Aux+V

{Mary slept. / Mary spała.} Det+N+Aux+ $\begin{bmatrix} +V \\ -\_\_\_NP \\ +[+\text{Animate}]\ \_\_\_ \\ \cdot \\ \cdot \\ \cdot \\ +\text{Fn} \end{bmatrix}$

The existence of the feature [+ ____ NP] in (9) eliminates the possibility for the sub-type (11) to be inserted into the string (9)). The feature [+[+Animate] ____], when referring to a preceding subject group, is superordinate to the feature [+[+Human] ____] in (9):

(12) {Mary weighs her husband. / Mary waży swego męża.}

*{A she-dog weighs her husband. / Suka waży swego męża.}

{Mary slept. / Mary spała.}

{A she-dog slept. / Suka spała.}

$$\text{(13)}\quad \left\{\begin{array}{l}\text{Mary is pretty.}\\ \text{Mary jest ładna.}\end{array}\right\}\qquad \text{Det+N+Aux+Adj}$$

$$\left\{\begin{array}{l}\text{John is a politician.}\\ \text{John jest politykiem.}\end{array}\right\}\qquad \text{Det+N+Aux+Det+N}$$

In both examples the verb *to be* is semantically empty and its only function is to carry the surface representation of the tense (Aux).

Before presenting the set of lexical features for (13), I propose the deletion of [{±} Pass] feature (which was exemplified in (8), (9)) and an equivalent insertion of an utterly new [{±} Parallel] feature to be utilized from now on in this paper. The reason for this change is that the proposed [{±} Parallel] feature, being equally effective as a passivization/non-passivization blocker is, besides, in power to show some other vital syntactic functions at first glance, which the [{±} Pass] feature fails to do. In (13):

(13) John is a politician.

the lexical specification might be as follows:

$$\text{(14)}\quad \text{Det+N+}\begin{bmatrix}+\emptyset\\ +\_\_\_\,\text{NP}\\ -\text{Pass}\end{bmatrix}\text{+Det+N}$$

or:

$$\text{Det+N+}\begin{bmatrix}+\emptyset\\ +\_\_\_\,\text{NP}\\ +\text{Parallel}\end{bmatrix}\text{+Det+N}$$

The feature [−Pass] shows that the sentence in view cannot be transformed into the passive voice. The [+Parallel] feature does not only indicate that the sentence cannot be passivized, but also that both the pre-verbal and post-verbal constituents are coreferential. As a result, the [{±} Parallel] feature a throws very explicit and "observable" light on the question of noun or verb complementation. To add, when [{±} Pass] refers strictly to the process of passivization, [{±} Parallel] joins at least two important and interdependent functions, namely passivization and coreferentiality of pre- and post-verbal constituents. Therefore, since now on, the appearance/non-appearance of passivization will be presented by the [{±} Parallel] feature in this work. Thus, the sentence (13) may be considered as follows:

$$\text{(15)}\quad \text{Det+N+Aux+}\begin{bmatrix}\begin{array}{l}+\emptyset\\ +\_\_\_\end{array}\left\{\begin{array}{l}\text{Adj}\\ \text{NP}\end{array}\right\}\\ +\text{Parallel}\\ +\_\_\_+\text{N}\underline{\text{c}}\\ \cdot\\ \cdot\\ \cdot\\ +\text{Fn}\end{bmatrix}+\left\{\begin{array}{l}\text{Det+N}\\ \text{Adj}\end{array}\right\}$$

The second new feature which has been inserted into the matrix (15) is the contextual feature [____ +Nc]. The symbol of the feature means the *case* of the post-verbal constituent. Since the case of the post-verbal nominals is governed by the verb in a contrastive way in Polish with reference to English, the case specification must be part of the matrix characterizing that verb:

$$(16)\quad \left\{\begin{array}{l}\text{John is a politician.}\\ \text{John jest politykiem.}\end{array}\right\}\qquad \begin{array}{l}\text{(Nominative)}\\ \text{(Instrumental)}\end{array}$$

The next structural constituent of the PS-rules base (10b) is the pair:

$$(17)\quad \begin{array}{l}\left\{\begin{array}{l}\text{John became a teacher.}\\ \text{John został nauczycielem.}\end{array}\right\}\\ \left\{\begin{array}{l}\text{John became rich.}\\ \text{John stał się bogaty.}\end{array}\right\}\end{array}\qquad \text{Det+N+Aux+V+}\left\{\begin{array}{l}\text{Det+N}\\ \text{Adj}\end{array}\right\}$$

Its realization on the level of terminal string serving as the output for lexical insertion does not differ from that of the "object" type. The lexical analysis for this structure, when completed according to the demands and scope of the present paper, is as follows:

$$(18)\quad \text{Det+N+Aux+}\begin{bmatrix}\text{+V}\\ \text{+\_\_\_}\left\{\begin{array}{l}\text{NP}\\ \text{Adj}\end{array}\right\}\\ \text{+Parallel}\\ \text{+\_\_\_\_+N}\underline{\text{c}}\\ \text{+[+Human]\_\_\_\_}\\ \cdot\\ \cdot\\ \cdot\\ \text{+Fn}\end{bmatrix}+\left\{\begin{array}{l}\text{Det+N}\\ \text{Adj}\end{array}\right\}$$

From the point of view of subcategorization, the [+Parallel] feature shows that the NP following the verb *to become* is of the predicate-nominal character. The selectional feature [+[Human]____] referring to the preceding subject element imposes its semantic range on the post-verbal element, too. The existence of the [+Parallel] feature in the above structure differentiates the latter from that of the verb-object type (9) in which no [+Parallel] feature exists unless the verb-object relation is of the verb-reflexive pronoun type:

(19) John cut himself.
John zaciął się.

$$\begin{bmatrix}\text{+V}\\ \text{+Parallel Refl.}\end{bmatrix}$$

On the basis of the consideration thus far presented, it may be noticed that the verb-class differentiation within the range of PS-rules base is mainly conditioned by the application of the set of the ***strict subcategorization rules***, e.g. ____ NP, ____ Adj, Parallel, etc. (Allen and Buren 1972: 55).

The discrimination within the range of one verb-class, e.g., that of taking the direct object, is conditioned mainly by the insertion of a set of ***selectional rules*** (for a detailed description see Stockwell, Bowen and Martin 1969: 64–104 and Fowler 1971: chapter 6). Accordingly, such verbs as e.g. ***to weigh, to notice, to surprise*** belong to the same verb-direct object class as bearing the same subcategorization characteristics, such as [+ ____ NP] and [−Parallel]. Their contextual pre- and postverbal freedom, is both conditioned and limited by ***selectional syntactic features*** "attached" to each of the left-side and right-side constituents of the verb:

(20)
$$\text{Mary weighs her } \left\{\begin{array}{l}\text{husband}\\ \text{jewel}\\ \text{*experience}\end{array}\right\}$$

$$\text{Mary waży } \left\{\begin{array}{l}\text{swego męża}\\ \text{swój klejnot}\\ \text{*swe doświadczenie}\end{array}\right\}$$

$$\text{John noticed } \left\{\begin{array}{l}\text{a man}\\ \text{a stone}\\ \text{the/ø milk}\\ \text{*ø love}\end{array}\right\}$$

$$\text{John spostrzegł } \left\{\begin{array}{l}\text{mężczyznę}\\ \text{kamień}\\ \text{mleko}\\ \text{*miłość}\end{array}\right\}$$

$$\begin{array}{ll}\text{The/a } \left\{\begin{array}{l}\text{girl}\\ \text{dog}\end{array}\right\} \text{ surprised} & \multirow{2}{*}{$\left\{\begin{array}{l}\text{Mary}\\ \text{us}\\ \text{*a stone}\\ \text{*ø love}\end{array}\right\}$}\\ \text{This } \left\{\begin{array}{l}\text{tree}\\ \text{rock}\end{array}\right\} \text{ surprised} & \\ \text{His } \left\{\begin{array}{l}\text{love}\\ \text{passion}\end{array}\right\} \text{ surprised} & \end{array}$$

$$\begin{array}{ll}\begin{array}{l}\text{(Ta) dziewczyna zaskoczyła}\\ \text{(Ten) pies zaskoczył}\\ \text{(To) drzewo zaskoczyło}\\ \text{(Ta) skała zaskoczyła}\end{array} & \left\{\begin{array}{l}\text{Marię}\\ \text{nas}\\ \text{*kamień}\\ \text{*miłość}\end{array}\right\}\\ \text{Jego miłość zaskoczyła} & \\ \text{Jego namiętność zaskoczyła} & \end{array}$$

The specification just presented allows us to arrange three separate lexical-features samples for each of the discussed verb-direct object sub-type:

(21) a. *weigh* e.g. a husband
ważyć męża

$$\left[\begin{array}{l} +\text{V} \\ +\underline{\hspace{2em}}\,\text{NP} \\ -\text{Parallel} \\ +\text{Parallel Refl.} \\ +\underline{\hspace{2em}}\;+\text{N}\underline{\text{c}} \\ +\underline{\hspace{2em}}[+\text{Concrete}] \\ +[+\text{Human}]\underline{\hspace{2em}} \\ . \\ . \\ . \\ +\text{Fn} \end{array}\right]$$

b. *notice*
zauważyć

$$\left[\begin{array}{l} +\text{V} \\ +\underline{\hspace{2em}}\,\text{NP} \\ -\text{Parallel} \\ -\text{Parallel Refl.} \\ +\underline{\hspace{2em}}\;+\text{N}\underline{\text{c}} \\ +\underline{\hspace{2em}}[+\text{Concrete}] \\ +[+\text{Animate}]\underline{\hspace{2em}} \\ . \\ . \\ . \\ +\text{Fn} \end{array}\right]$$

c. *surprise*
zdziwić (*się*), *zaskoczyć*

$$\left[\begin{array}{l} +\text{V} \\ +\underline{\hspace{2em}}\,\text{NP} \\ -\text{Parallel} \\ +\text{Parallel Refl.} \\ \underline{\hspace{2em}}\,+\text{Nc} \\ +\underline{\hspace{2em}}[+\text{Human}] \\ +\begin{array}{r}+\\+\end{array}\left[\begin{array}{l}+\text{Concrete}\\+\text{Abstract}\end{array}\right]\underline{\hspace{2em}} \\ . \\ . \\ . \\ +\text{Fn} \end{array}\right]$$

As the three above verbs form one superordinate class, that is, that taking the object, they follow the same strict subcategorization rules. It is their selectional features that make them differ as the sub-types. All the three samples mentioned support the claim that:

a. though the three presented verbs play the same syntactic function, which is that of domination over the direct object, and in this respect form one superordinate class, they stand for three different sub-types as a result of bearing at least one distinct selectional feature;

b. the lexical part of the verb-direct object grammar refers exchangeably to both English and Polish lexical categories. This assumption indicates that the process of lexical-features insertion is parallel in two languages under consideration.

1.3. *Deixis as a Contrastive Criterion in English–Polish Transitive Verb Analysis.*

The application of PS-rules, lexical insertion, and lexical-features specification, that is, the procedures which have been considered here up to now, have shown no substantial contrastive features between the two analysed languages. On the levels in question, then, two languages share the identical "la langue" properties.

The situation changes radically on the level of deictic features which show a far-reaching contrastive variety when referred to English and Polish. It should be stipulated, however, that the contrasts in view go hand in hand with similarities. It ought to be mentioned, too, that, first of all all, the deictic qualities of a sentence point to its location in relation to a spatio-temporal-personal context, and, as such give, the listener of a given sentence a spatio-temporal-personal orientation. Both in English and Polish deictic information and associated meanings, such as e.g. definiteness, aspect, mood, etc., are conveyed by a large variety and quantity of morphemes and morpheme-sequences, all of them in the surface structure of the two languages. It is surface structure which stands for the very ground of the application of the performance (speaker's) grammar, and where different language systems reveal their contrastive features.

The two obligatory representatives of deictic system, both in English and Polish, are *Det* and *Aux*. In our terminal verb-direct object string (plus lexical insertion) their positional status is as follows:

$$
\begin{array}{llllll}
\text{(22)}\ Det+ & \text{Mary}+Aux+ & \begin{Bmatrix}\text{notice}\\ \text{zobaczyć}\end{Bmatrix} & & +Det+ & \begin{Bmatrix}\text{devil}\\ \text{diabeł}\end{Bmatrix}\\
 & \begin{bmatrix}+N\\ \cdot\\ \cdot\\ \cdot\\ +Fn\end{bmatrix} & \begin{bmatrix}+V\\ +\underline{\quad}\ NP\\ -\ \text{Parallel}\\ +\underline{\quad}\ +Nc\\ +\underline{\quad}\ [+\text{Concrete}]\\ +[+\text{Animate}]\underline{\quad}\\ \cdot\\ \cdot\\ \cdot\\ +Fn\end{bmatrix} & & & \begin{bmatrix}+N\\ \cdot\\ \cdot\\ \cdot\\ +Fn\end{bmatrix}
\end{array}
$$

As follows from the above presented sample, both the obligatory deictic formatives participate in forming the verb-direct object class and, as such, cannot escape contrastive specification. A detailed analysis of this sort, however, reaches far beyond the scope of the present paper. For these reasons only a generalized specification of the Det and Aux formatives is to follow

The specification is to be presented as a process resulting from the application of special deictic-transformational rules:

$$\text{(23)}\ x+\begin{array}[t]{c}\text{Aux}\\ \begin{bmatrix}\text{Tense}\\ \text{Aspect}\\ \text{Mood}\\ \text{Voice}\end{bmatrix}\end{array}+\begin{array}[t]{l}\left\{\begin{array}{l}\text{notice}\\ \text{zobaczyć}\end{array}\right\}\\ \begin{bmatrix}+\text{V}\\ +\underline{\quad\quad}\,\text{NP}\\ -\text{Parallel}\\ +\underline{\quad\quad}+\text{Nc}\\ +\underline{\quad\quad}[+\text{Concrete}]\\ +[+\text{Animate}]\underline{\quad\quad}\\ .\\ .\\ .\\ +\text{Fn}\end{bmatrix}\end{array}+\begin{array}[t]{c}\text{Det}\\ \begin{bmatrix}\text{Number}\\ \text{Universality}\end{bmatrix}\end{array}+\begin{array}[t]{l}\left\{\begin{array}{l}\text{devil}\\ \text{diabeł}\end{array}\right\}\\ \begin{bmatrix}+\text{N}\\ +\text{Count}\\ .\\ .\\ .\\ +\text{Fn}\end{bmatrix}\end{array}$$

$$\text{a.}\ x+\begin{bmatrix}\text{Past}\\ \text{Momentary}\\ \text{Indicative}\\ \text{Active}\end{bmatrix}+\begin{bmatrix}+\text{V}\\ +\underline{\quad\quad}\,\text{NP}\\ -\text{Parallel}\\ +\underline{\quad\quad}+\text{Nc}\\ +\underline{\quad\quad}[+\text{Count}]\\ +[+\text{Animate}]\underline{\quad\quad}\end{bmatrix}+\begin{bmatrix}\text{Number}\\ \text{Universality}\end{bmatrix}+\begin{bmatrix}+\text{N}\\ +\text{Count}\\ .\\ .\\ .\\ +\text{Fn}\end{bmatrix}$$

$$\text{b.}\ x+\begin{bmatrix}\text{Past}\\ \text{Momentary}\\ \text{Indicative}\\ \text{Active}\end{bmatrix}+\begin{bmatrix}+\text{V}\\ +\underline{\quad\quad}\,\text{NP}\\ -\text{Parallel}\\ +\underline{\quad\quad}+\text{Nc}\\ .\\ .\\ .\\ +\text{Fn}\end{bmatrix}+\begin{bmatrix}-\text{Pl}\\ -\text{Universality}\end{bmatrix}+\begin{bmatrix}+\text{N}\\ +\text{Count}\\ .\\ .\\ .\\ +\text{Fn}\end{bmatrix}$$

$$\text{c.}\ x+\begin{bmatrix}+\text{Past}\\ \text{Momentary}\\ \text{Indicative}\\ \text{Active}\end{bmatrix}+\begin{bmatrix}+\text{V}\\ +\underline{\quad\quad}\,\text{NP}\\ -\text{Parallel}\\ +\underline{\quad\quad}+\text{Nc}\\ .\\ .\\ .\\ +\text{Fn}\end{bmatrix}+\begin{bmatrix}-\text{Pl}\\ -\text{Universality}\end{bmatrix}+\begin{bmatrix}+\text{N}\\ +\text{Count}\\ .\\ .\\ .\\ +\text{Fn}\end{bmatrix}$$

$$\text{d.}\ x+\begin{bmatrix}+\text{Past}\\ \text{Momentary}\\ \text{Indicative}\\ \text{Active}\end{bmatrix}+\begin{bmatrix}+\text{V}\\ +\underline{\quad\quad}\,\text{NP}\\ -\text{Parallel}\\ +\underline{\quad\quad}+\text{Nc}\\ .\\ .\\ .\\ +\text{Fn}\end{bmatrix}+\begin{bmatrix}-\text{Pl}\\ -\text{Def}\end{bmatrix}+\begin{bmatrix}+\text{N}\\ +\text{Count}\\ .\\ .\\ .\\ +\text{Fn}\end{bmatrix}$$

String d. is a detailed symbolization of the sentence *Mary noticed a devil* in terms of both syntactic and semantic features (as the subject group has not been analysed here because it is irrelevant for the verb-direct object connection, it has been replaced by a generalizing symbol "x"). The *Det* features presented above are not complete. In fact, obligatory features such as *Number* and *Universality* are often accompanied by a set of optional ones, such as *Cardinal*, *Ordinal* and *Quant*. Altogether, both *Det* and *Aux* are generalized symbols covering complex sets of obligatory and optional discriminating features. As there is no established or regular correspondence between the English surface-structure representation of these features and the Polish one, each of the features, in fact, might stand for a separate target of contrastive researches on the surface-structure level. It is not the aim of the present paper, however, to present the deictic features of the two considered language systems in details (for a detailed description cf. Fowler 1971:chapter 6). For this reason, an unspecified demonstration of the features under consideration will do. It is enough to show, in accordance with the aim of the work, this level of grammar realization as standing for a rich source of contrastive phenomena. A detailed analysis will be done with reference to the feature which, in majority of cases, has not been formally exemplified in the TG procedure for all its qualities as a contrastive factor. The feature in view is that of *case*.

1.4. *Contrastive Value of Case in Contrastive Analysis of English–Polish Verb-Direct Object Class.*

In English, the case feature is of minor importance as a syntactic factor. It has not been inserted as a functional formative to the TG system at all by some authors (Chomsky; Lester 1971: 49). Some other linguists (e.g. Fowler 1971: 112–113; Jacobs and Rosenbaum 1968: 221) insert the optional +Acc/ —Acc marker with reference to the specification of Pro-forms. It happens so though other noun features such as e.g. Number (see deixis, pp. 14–15) are fully recognized on various levels of TG realization. To comment on this situation is to say that the negligence of the recognition of the case feature within the system of TG referring to English is fully justified by the system itself. Indeed, the speciality of this system is that the case distinction may be observed with reference to pronouns exclusively. As to the nouns, there is no morphological case distinction characteristic of this lexical category and, therefore, no special rules are necessary within the TG procedure. In other words, the lack of case affixation in English nouns makes the case a syntactically empty feature (with reference to nouns, of course, and not to pronouns) and thus deprives the verb of its overt governing power. This situation leads to a limitation of word-order freedom so that once established linear sequence of sentence elements must be respected in majority of cases unless the grammaticality of the sentence itself is broken. It is especially well recognizable in our verb-direct object connection:

(24) a. I saw _Mary_. but: *_Mary_ I saw.
a table. *_A table_ I saw.
b. _Mary_ has passed her exam.
The table is large.

The same happens when a noun phrase taking the direct-object position consists of a head and its modifier because, in English, the latter one is usually deprived of any distinguishing case morphemes, either:

(25) a. I saw _a table_.
A table is made of wood.
b. I saw _a pretty_ table.
This pretty table is made of wood.

In Polish, the counterpart verb-direct object connection is of much greater complexity than in English. First, the majority though not all Polish nouns have their separate subject-direct object suffixation:

(26) a. Widziałem _Mari-ę_.
Maria poszła do lasu.
but: b. Widziałem _liść_.
Liść spadł z drzewa.

Second, the noun modifiers in noun phrases have their own subject-direct object case-suffixation quite often, but again not always:

(27) a. Widziałem _piękn-ą_ Marię.
Piękna Maria poszła do lasu.
but: b. Podziwialiśmy _piękny_ zamek.
Piękny zamek stał na zboczu.

As a result it may happen that the overtness of the verb-direct object government may be predominated by the modifier of a given noun phrase and not by its head noun:

(28) a. Stary pies zjadł _duż-ą kość_.
b. _Duża kość_ leży na ziemi.

We may conclude now that, in Polish, whenever either the head of a noun phrase taking the direct object position or its modifier or both of them have at their command their distinct direct-object case-morphemes they let the noun phrases of this kind undergo an overt government. Whenever it happens, the verbs may loosen their arrangement regime so that, for example, the following sentences are both grammatical and non-deviant:

(29) a. Widziałem Marię.
b. Marię widziałem.

The differences presented above, however, are by no means all that exist in this field. Let us confront the following Polish-English sentences:

(30) a. (Ja) bronię sprawiedliwości — czego?
I defend justice-ø — what?
(Ja) nie mam paczki — czego? {Genitive
"dopełn. dopełniaczowe"
I have not a parcel-ø — what? Common Case
b. John wziął paczkę — co? {Accusative
"dopełn. biernikowe"
John took a parcel-ø — what? Common Case
c. Mary pogardza Jankiem — kim? {Instrumental
"dopełn. narzędnikowe"
Mary despises John-ø — who/m? Common Case

With reference to Polish verb counterparts, according to Z. Klemensiewicz (1963: 40–43), all these sub-types of verbs belong to the objectival superordinate group when being specified as "dopełnienie dopełniaczowe", "dopełnienie biernikowe", "dopełnienie narzędnikowe". In fact, the above parallel Polish-English verb sub-types exhibit the following similarities and differences:

a. all the English sub-types of verbs dominate the same case, which is the *Common Case*. Their Polish counterparts have special sets of case-suffixes different for each sub-type;

b. both English and Polish counterparts share an equivalent differentiation into active and middle verbs resulting from the fact that the former ones may be turned into the passive voice while the latter ones cannot, e.g.:

(31) a. I have not a parcel ⇒ *A parcel is not had by me.
(Ja) nie mam paczki ⇒ *Paczka nie jest przeze mnie miana.
b. John took a parcel ⇒ A parcel was taken by John.
John wziął paczkę ⇒ Paczka została wzięta przez Johna.

Notwithstanding the claims of some authors that all the subtypes under consideration take objects differentiated according to the case which the verbs impose on them, it should be stressed that only the verbs bearing the [—Parallel]/[+Pass] feature, that is, those imposing the Accusative/Common Case on the following constituent, may take *genuine* verb-object connections. The middle verbs cannot belong to this genuine verb-object sub-class formally because their post-verbal constituents corefer to the Subject of a sentence:

(32) a. John weighs two tons.
Mary has three children.
This book costs 6 shillings.
b. John saw Mary.

In (32a) *two tons* is a quality of John, *three children* belong to Mary, and *six shillings* is the value of the book. In (32b) John can by no means be identified with Mary. Thus the [+Parallel] feature may be, in this sense, applied to all middle verbs, too. This means that the feature holds equally good as a discriminating device for the verb transitiveness/intransitiveness, on the one hand, and its further specification within the transitive superordinate class into verb-object/verb-non-object sub-class, on the other. This universality of the [(±) Parallel] feature makes it of *at least* equal discriminating quality with that of [(±) Pass].

To come back to our discussion now, it should be noticed that, first, from the point of view of case government all the English representatives of the above mentioned sub-types share the identical Common Case standing thus in a striking contrast with their Polish inflectionally diversified equivalents. Second, from the point of their sharing the "transitiveness" feature, they may be in the present analysis regarded as the "allo" classes of the superordinate verb-transitive class. The last but not least is that, in our opinion, the mid-verb sub-class should not have its separate status in the present contrastive English-Polish evaluation. Otherwise, taking into account the variety of Polish verb-noun phrase relations, the confrontation of the two systems would be hardly possible with respect to this part of grammar. Any consequent contrastive analysis of the two language systems during the process of their simultaneous generation within the TG system may be performed effectively only on condition that a mutual, parallel basis is formed to let all the contrastive but equivalent features of both languages be compared and confronted at the same time. This process should not be accompanied by any violation of the unity of TG system.

On the basis of what has just been said, we can come to the following conclusions:

1. in contrastive English-Polish analysis, the importance of the case feature grows violently in comparison to when English alone was taken into account;

2. the above mentioned "unification" principle, i.e., the contrastive evaluation of the two languages during the process of TG application, may be carried out only on condition that some additional contrastive case features are inserted in the English TG system, so that a simultaneous, counterpart generation of equivalent structures may be done regardless of all morphological contrasts of the case. The model for realization of these additional syntactic arrangements is presented below:

(33) a. English:

$$\mathrm{NP} \rightarrow \left\{ \begin{matrix} \mathrm{PRO_D + PRO_A} \\ \mathrm{Det + N + N\underline{o}} \end{matrix} \right\}$$

b. English+Polish:

$$\mathrm{NP} \rightarrow \left\{ \begin{matrix} \mathrm{PRO_D + PRO_N + N\underline{c}} \\ \mathrm{Det + N + N\underline{o}} \end{matrix} \right\}$$

in which, as has already been mentioned on page 279. **Nc** is a new element inserted in the grammar system to specify the contrastive verb-direct object government specialities on the basis of obligatory rules. To make this general rule operational, however, its further specification should follow:

(34) **English:**

a. heads of the direct object noun phrases (without modifiers):

$$1.\ N\underline{c} \rightarrow Acc \begin{cases} [\emptyset] & \text{— where Acc=Nom—covert gov. (o)} \\ [Acc] & \text{— where Acc} \neq \text{Nom—overt gov. (+)} \end{cases}$$

b. noun-phrase modifiers:

$$1.\ N\underline{c} \rightarrow \left\{ \begin{array}{l} Gen=[Gen] \text{ — where Gen} \neq \text{Nom} \\ Acc \begin{cases} [\emptyset] & \text{— where Acc=Nom} \\ [Acc] & \text{— where Acc} \neq \text{Nom} \end{cases} \end{array} \right\} \text{(—)=no influence of modifiers on the gov. of the NP}$$

Polish:

a. nouns appearing alone in the direct object position:

$$1.\ N\underline{c} \rightarrow \begin{cases} Gen=[Gen] \text{ — where Gen} \neq \text{Nom — overt gov. (+)} \\ Acc \begin{cases} [\emptyset] & \text{— where Acc=Nom—covert gov. (o)} \\ [Acc] & \text{— where Acc} \neq \text{Nom—overt gov. (+)} \end{cases} \\ Instr=[Instr] \text{ — where Instr} \neq \text{Nom—overt gov. (+)} \end{cases}$$

b. pronouns appearing alone in the direct object-position and taking the function of nouns:

$$1.\ N\underline{c} \rightarrow \begin{cases} Gen=[Gen] \text{ — where Gen} \neq \text{Nom—overt gov. (+)} \\ Acc \begin{cases} [\emptyset] & \text{— where Acc=Nom—covert gov. (o)} \\ [Acc] & \text{— where Acc} \neq \text{Nom—overt gov. (+)} \end{cases} \\ Instr=[Instr] \text{ — where Instr} \neq \text{Nom—overt gov. (+)} \end{cases}$$

c. noun phrase modifiers:

$$1.\ N\underline{c} \rightarrow \begin{cases} Gen \begin{cases} [Gen_0] & \text{— where Gen} \neq \text{Nom — no influence on the overtness of the whole NP (—)} \\ [Gen_1] & \text{— where Gen} \neq \text{Nom — the modifier co-operates in making the gov. overt (+)} \end{cases} \\ Acc \begin{cases} [Acc_0] & \text{— where Acc=Nom — the modifier co-operates in making the gov. covert (o)} \\ [Acc_1] & \text{— where Acc} \neq \text{Nom — the modifier co-operates in making the gov. overt (+)} \\ [Acc_2] & \text{— where Acc} \neq \text{Nom — the modifier \textit{determines} the overtness of the whole NP (++)} \end{cases} \\ Instr=[Instr] \text{ — where Instr} \neq \text{Nom — overt gov. (+)} \end{cases}$$

Examples for English — a. (nouns without modifiers):

1. Acc=[ø] — the nouns not accompanied by modifiers, with the case characteristics: Acc=Nom (Common Case):

A boy saw me.
I saw *a boy*.

2. Acc=[Acc] — mainly the personal pronouns (except: *it*, *you*), owing to their direct-object position being formally distinguished:

me	us
him	them
her	

and the reflexive pronouns, because they cannot take the subject pre-verbal place and, thus, have their distinct object form:

He washed *himself*.
**Himself* went to meet Mary.

Examples for English-b. (noun phrase modifiers):

1. Gen=[Gen] — where Gen≠Nom

Mary took $\overbrace{\textit{John's}\text{ umbrella}}$ as it started to rain.

$\overbrace{\textit{John's}\text{ umbrella}}$ was worth for nothing.

We met $\overbrace{\text{a friend }\textit{of ours}}$.

$\overbrace{\text{A friend }\textit{of ours}}$ gave us a book.

We met $\overbrace{\text{the boy }\textit{whose}\text{ mother had bought a new house}}$.

$\overbrace{\text{The boy }\textit{whose}\text{ mother had bought a new house last year}}$ joined us at last.

2. Acc=[ø] — where Acc=Nom

I saw $\overbrace{\textit{a pretty}\text{ girl}}$.

$\overbrace{\textit{A pretty}\text{ girl}}$ smiled at Tom.

We observed $\overbrace{\textit{three old}\text{ ladies}}$.

$\overbrace{\textit{Three old}\text{ ladies}}$ liked drinking strong whiskey.

They took $\overbrace{\textit{a boxer}\text{ dog}}$ with them.

$\overbrace{\textit{A boxer}\text{ dog}}$ is very watchful.

3. Acc=[Acc] — where Acc≠Nom

We saw the man *whom* my father had sent off to Africa several years before.

The man *whom* my father had sent off to Africa several years before came back yesterday.

As all these examples indicate, the overtness or covertness of government in English depends on the head of a given noun phrase taking the post-verbal, objectival position, and not on the morphological characteristics of its modifier(s).

(35) Examples for Polish — a. (nouns without modifiers):

1. Gen=[Gen] — where Gen≠Nom

Nie miałem *pióra*.
Nie oglądałem *filmu*. Dopełnienie dopełniaczowe.
Unikam *dziewczyn*.
Dziewczyny patrzą na nich.

2. Acc=[0] — where Acc=Nom

Widziałem wczoraj *film*.
Film robi wrażenie na widzu. Dopełnienie biernikowe.
Kupiłem wczoraj *pióro*.
Pióro leżało na stole.

3. Acc=[Acc] — where Acc≠Nom

Zaprosiliśmy *ułana*.
Ułan był przystojny.
Widzieliśmy *dziewczynę*. Dopełnienie biernikowe.
Dziewczyna poszła do lasu.

4. Instr=[Instr] — where Instr≠Nom

Rozporządzał *funduszami*.
Fundusze były znaczne.

Wiadomość wstrząsnęła *Jankiem*. Dopełnienie narzędnikowe.
Janek był wstrząśnięty wiadomością.

Examples for Polish — b. (pronouns functioning as noun equivalents):

1. Gen=[Gen] — where Gen≠Nom

Nie widziałem *jej* przez wieki.

Ona musi przyjechać natychmiast.
Dowodziłem *tego* zapamiętale.
*Dowodziłem *to* zapamiętale.
Nie ma *ich* w domu.
*Nie ma *oni* w domu.
Nie wiem *czego* się lękasz.
*Nie wiem *co* się lękasz.

2. Acc=[ø] — where Acc=Nom

Co robiłeś wczoraj?
Co jest lepsze, zupa czy drugie danie?

3. Acc=[Acc] — where Acc$\neq$Nom

Spotkałem *go* na stacji.
On był na stacji.
Kogo widziałeś na stacji?
Kto jest na stacji?
Zmuszę *ich*.
Oni mają rację.

4. Instr=[Instr] — where Instr$\neq$Nom

Gardzisz *nią* z całej duszy.
**Nią* kieruje się złymi zasadami.
Kierował *nimi* mądrze.
Oni są kierowani mądrze.

Examples for Polish — c. (noun phrase modifiers):

1. Gen=[Gen_0] — where Gen$\neq$Nom, but there is no influence on the covertness/overtness of the whole noun phrase.

Podziwialiśmy $\overbrace{\text{samochód } \textit{Janka}}$.

$\overbrace{\text{Samochód } \textit{Janka}}$ stał na ulicy.

Oglądałem $\overbrace{\textit{jej} \text{ płaszcz}}$.

$\overbrace{\textit{Jej} \text{ płaszcz}}$ jest trochę za krótki.

2. Gen=[Gen_1] — where Gen$\neq$Nom, and it participates in making government of the noun phrase overt

Nie znam $\overbrace{\textit{tej} \text{ piosenki}}$

$\overbrace{\textit{Ta piosenka}}$ jest ładna.

Unikaliśmy *tego głośnego* hałasu.

Ten głośny hałas nas denerwuje.

Dostaliśmy *ostrych* dreszczy.

Ostre dreszcze dają się we znaki.

Zachciało mu się *cudzej* żony.

Cudza żona zabrała głos.

Żądam *dwóch* dni.

Dwa dni to za mało.

3. Acc=[AccØ] — where Acc=Nom, and it participates in making the government of a given NP covert

Podziwialiśmy *wesoły* spektakl.

Wesoły spektakl wprawia widzów w dobry nastrój.

Wspominaliśmy *ten* kamień koło drogi.

Ten kamień koło drogi ma swą długą historię.

Badał *to* dziecko przez okrągły rok.

To dziecko nie potrafi jeszcze mówić.

4. Acc=[Acc$_1$] — where Acc≠Nom, and it participates in making the government of a given NP overt

Zaprosiliśmy *tego przystojnego* ułana na przyjęcie.

Ten przystojny ułan jest przez nas mile widziany.

Uczyłem *cudzego* syna bo swego nie miałem.

Cudzy syn jest podatny na choroby.

Spotkałem *tego* faceta w Montrealu.

Ten facet przyjechał do Montrealu.

5. Acc=[Acc$_2$] — where Acc≠Nom, and it *determines* the overtness of the whole noun phrase

Zauważyłem *białą* kość na pustyni.

Biała kość leżała w piasku.

Zajęli *cichą* wieś na zboczu góry.

Cicha wieś to me marzenie.

Kupiliśmy *białą* łódź by wyruszyć w świat.

Biała łódź kołysze się na fali.

6. Instr=[Instr] — where Instr≠Nom

Odznaczał się *tanim* gestem.

Tani gest nie robi na mnie wrażenia.

Popędzał *swymi* ludźmi bez litości.

. The reader should notice now that owing to the complexity of Polish morphological system of case, the overtness of government, in contradistinction to English, does not always depend on the head of a given noun phrase solely. It may happen that the morphological quality of the head claims a covert government (Acc=Nom) but, at the same time, the modifier of this very head has its morphological form characteristic for the overt government. In such arrangements the whole phrase is governed in an overt way, which means that the modifier's case suffixation determines the form of government. It is clearly observable in the following examples:

(36) a. Pies zjadł *grubą* kość

Gruba kość leży na ulicy.

but: b. Obejrzałem *dobry* film.

Dobry film robi wrażenie na widzu.

Now, consequently let us come back to the string (23d) which, as we remember, was the output of successive grammatical and lexical rules. The matrix sentence involved was *Mary* noticed *a devil*/ *Mary zobaczyła diabła.* The output string was as follows:

$$x+\begin{bmatrix}+\text{Past}\\ \text{Momentary}\\ \text{Indicative}\\ \text{Active}\end{bmatrix}+\begin{bmatrix}+\text{V}\\ +\_\_\_\text{NP}\\ -\text{Parallel}\\ +\_\_\_+\text{N}\underline{\text{c}}\\ .\\ .\\ .\\ +\text{Fn}\end{bmatrix}-\begin{bmatrix}-\text{Pl}\\ -\text{Def}\end{bmatrix}-\begin{bmatrix}+\text{N}\\ +\text{Count}\\ .\\ .\\ .\\ +\text{Fn}\end{bmatrix}$$

To prove the applicability of the model which has just been suggested, the successive application of the realization rules is to follow with respect to the newly introduced case features (again, the subject element has been presented in the form of a generalizing symbol "x"):

$$\text{(37)}\quad \text{x}+\ [+\text{Past}] + \left\{\begin{matrix}\text{notice}\\ \text{zobaczyć}\end{matrix}\right\} + \left[\begin{matrix}-\text{Pl}\\ -\text{Def}\end{matrix}\right] + \left\{\begin{matrix}\text{devil}\\ \text{diabeł}\end{matrix}\right\} + \left[\begin{matrix}\text{E: ø}\\ \text{P: Acc}\end{matrix}\right]$$

$$\text{x}+\ \left\{\begin{matrix}-\text{ed}\\ -\text{ła}\\ -\text{ł}\\ -\text{ło}\end{matrix}\right] + \left\{\begin{matrix}\text{notice}\\ \text{zobaczyć}\end{matrix}\right\} + \left[\begin{matrix}-\text{Pl}\\ -\text{Def}\end{matrix}\right] + \left\{\begin{matrix}\text{devil}\\ \text{diabeł}\end{matrix}\right\} + \left[\begin{matrix}\text{E: ø}\\ \text{P: Acc}\end{matrix}\right]$$

$$\text{x}+\text{Af}+\text{V}+\text{Y} \Rightarrow \text{x}+\text{V}+\text{Af}+\text{Y}$$

$$\text{x}+\ \left\{\begin{matrix}\text{notice}\\ \text{zobaczyć}\end{matrix}\right\} + \left\{\begin{matrix}-\text{d}\\ \left(\begin{matrix}-\text{ła}\\ -\text{ł}\\ -\text{ło}\end{matrix}\right)\end{matrix}\right\} + \left[\begin{matrix}-\text{Pl}\\ -\text{Def}\end{matrix}\right] + \left\{\begin{matrix}\text{devil}\\ \text{diabeł}\end{matrix}\right\} + \left[\begin{matrix}\text{E: ø}\\ \text{P: Acc}\end{matrix}\right]$$

$$\text{x}+\ \left\{\begin{matrix}\text{notice}\\ \text{zobaczyć}\end{matrix}\right\} + \left\{\begin{matrix}-\text{d}\\ -\text{ła}\end{matrix}\right\} + \left\{\begin{matrix}\text{a}+\text{ø}\\ \text{ø}+\text{ø}\end{matrix}\right\} - \left\{\begin{matrix}\text{devil}\\ \text{diabeł}\end{matrix}\right\} - \left\{\begin{matrix}\text{E: ø}\\ \text{P: Acc}\end{matrix}\right\}$$

$$\text{x}+\ \left\{\begin{matrix}\text{notice}\\ \text{zobaczyć}\end{matrix}\right\} + \left\{\begin{matrix}-\text{d}\\ -\text{ła}\end{matrix}\right\} + \left\{\begin{matrix}\text{a}+\text{ø}\\ \text{ø}+\text{ø}\end{matrix}\right\} - \left\{\begin{matrix}\text{devil}\\ \text{diabeł}\end{matrix}\right\} - \left\{\begin{matrix}-\text{ø}\\ -\text{ła}\end{matrix}\right\}$$

$$\text{(Mary)}+\ \left\{\begin{matrix}\text{noticed}\\ \text{zobaczyła}\end{matrix}\right\} + \left\{\begin{matrix}\text{a}\\ \text{ø}\end{matrix}\right\} + \left\{\begin{matrix}\text{devil}\\ \text{diabła}\end{matrix}\right\}$$

The following procedure shows, in turn, that the other subtypes mentioned above may be placed as the constituents with the same result, which is the generation of grammatically recognized strings. This refers to the both basic sub-types, i.e., the first bearing the [+Pass]/[−Parallel] feature and the second deprived of it:

$$\text{(38)}\quad \left\{\begin{matrix}\text{Mary despises John.}\\ \text{Mary pogardza Jankiem.}\end{matrix}\right\}$$

$$\text{x}+\text{Aux}+\text{V}+\text{Det}+\text{N}$$

$$\text{x}+\text{Aux}+\ \left[\begin{matrix}+\text{V}\\ +\underline{\quad}\,\text{NP}\\ +\underline{\quad}+\text{Nc}\\ -\text{Parallel}\\ +\underline{\quad}\left[\left\{\begin{matrix}+\\ +\end{matrix}\right\}\begin{matrix}\text{Concrete}\\ \text{Abstract}\end{matrix}\right]\\ +-\text{Human}\\ \cdot\\ \cdot\\ \cdot\\ +\text{Fn}\end{matrix}\right] +\text{Det}+\text{N}$$

$$\text{x}+\text{Aux}+\begin{bmatrix}+\text{V}\\ +\_\_\_\text{NP}\\ \cdot\\ \cdot\\ \cdot\\ +\text{Fn}\end{bmatrix}+\ \text{Det}\ +\begin{bmatrix}+\text{N}\\ +\text{Human}\end{bmatrix}+\ \text{N}\underline{\text{c}}$$

$$\text{x}+\begin{bmatrix}-\text{Past}\\ \text{Habitual}\\ \text{Indicative}\\ \text{Active}\end{bmatrix}+\begin{bmatrix}+\text{V}\\ +\_\_\_\text{NP}\end{bmatrix}+\begin{bmatrix}\text{Number}\\ \text{Univers.}\end{bmatrix}+\begin{bmatrix}+\text{N}\\ +\text{Human}\\ +\text{Name}\end{bmatrix}+\text{N}\underline{\text{c}}$$

$$\text{x}+\begin{bmatrix}-\text{Past}\\ \text{Habitual}\\ \text{Indicative}\\ \text{Active}\end{bmatrix}+\begin{bmatrix}+\text{V}\\ +\_\_\_\text{NP}\end{bmatrix}+\begin{bmatrix}-\text{Pl}\\ -\text{Univers.}\end{bmatrix}+\begin{bmatrix}+\text{N}\\ +\text{Human}\\ +\text{Name}\end{bmatrix}+\text{N}\underline{\text{c}}$$

$$\text{x}+\begin{bmatrix}-\text{Past}\\ \text{Habitual}\\ \text{Indicative}\\ \text{Active}\end{bmatrix}+\begin{bmatrix}+\text{V}\\ +\_\_\_\text{NP}\end{bmatrix}+\begin{bmatrix}-\text{Pl}\\ -\text{Univers.}\end{bmatrix}+\begin{bmatrix}+\text{N}\\ +\text{Name}\end{bmatrix}+\begin{bmatrix}\text{E: } 0\\ \text{P: Instr.}\end{bmatrix}$$

The application of realization rules would bring out any example of the sub-type both in English and Polish. Its semantic shape would depend on our lexical selection:

(39) Mary despises John.
He despises *Mary*.
On pogardza *Marią*.
Ten człowiek gardzi *pieniędzmi*.
On gardzi *miłością*.
He governs his *soldiers* well.
(On) dobrze rządzi *swymi żołnierzami*.
swym krajem.

To conclude, it should be mentioned that the reliability of the case-feature insertion and the need for such an insertion in contrastive analysis have been confirmed by the above empirical procedure.

1.5. *A Few Final Remarks.*

To end the paper, let us recall again its original aim. First of all, the author's desire was to show *some* of the contrastive English-Polish features referring to the superordinate transitive-verb class with a view of analysing *some* of the dissimilarities existing between the two languages respectively. Its ultimate aim, however, was to show not only the above mentioned features but also, as far as the scope of the work allowed, to place them as counterpart, operational constituents within the basis of TG system, and, the last but not least, to specify the levels of the TG successive realization according to hich of these levels are abounding in contrastive features.

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INTERLANGUAGE AND INTRALANGUAGE PARAPHRASE

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Paraphrase is an extremely interesting area of research both in descriptive linguistics proper as also in applied linguistics. In this paper it will briefly be considered from the language teaching point of view as a learning device to be exploited in the construction of teaching material., i.e., pedagogical grammar. Paraphrase, seen contrastively, can have four aspects. A string of forms can be formally identical or distinct both within one language and between language 1 and language 2. Following the general assumption that paraphrase is a matter of semantic sameness as judged by an educated native speaker or a component bilingual (see Marton 1968 and Krzeszowski 1971) we may say that an utterance may be paraphrased in the same language, either by giving a *strict equivalent* without changing the order or number of morphemes, or what may be called an *intralanguage paraphrase* where the order and number are changed. Paraphrase is most typically used of the latter type and very often where the new utterance is longer than the original. If we move to contrastive semantic statements, we have, following Marton (1968), an L2 utterance which is *congruent* with an L1 utterance having the same meaning in a given context or set of contexts. This state of congruence requires the same formal identity as we described for equivalence above. An *intralanguage paraphrase* changes the order and/or number of morphemes of the L1 original. There is, however, a situation arising out of the formal characteristics of L2 which produces what seem to be nearly congruent structures like *John's dog* and *pies Jana*. Under the present definition this would be an interlanguage paraphrase but more precisely it might be termed *loosely congruent* as long as the lexical morphemes remain the same in number and reference. If we wished to balance out this analysis, we might create the condition of *loose equivalence* within one language which would be the type of paraphrase involved in passivisation (*Betty hit Mary* : : *Mary was hit* *by Betty*). A typical translation procedure for converting an L1 string of forms into L2 terms would be as follows: Try a strictly congruent structure; if not acceptable, try a loosely congruent version; if not, restate original utterance as an intralanguage paraphrase and begin again. This may be similar to what learners often do despite attempts to isolate them from their own native language (see Fig. 1):

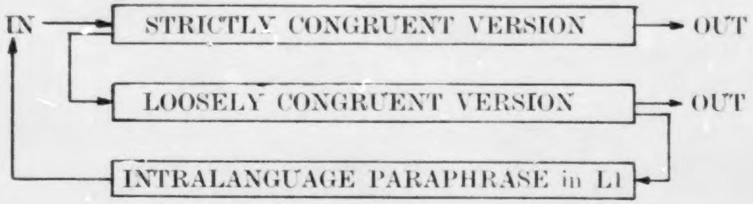
IN
STRICTLY CONGRUENT VERSION
OUT
LOOSELY CONGRUENT VERSION
OUT
INTRALANGUAGE PARAPHRASE in L1

Fig. 1. A typical L1–L2 conversion procedure

Thus *John's dog* might be converted to *Jana pies* and accepted; if not, to *pies Jana* and accepted; and if for some stylistic reason this was not accepted, the paraphrase, *the dog which belongs to John*, would be constructed and then once again sent through the same process, the first stage of which would render *pies, który należy do Jana*.

It has been noted by Smaby (1971) that certain paraphrases are more easily formalised than others, a typical example being the passivised form of an active sentence. Such paraphrases do not require special knowledge of the linguistic or extralinguistic context although their appropriateness in context will of course depend on such factors. There are some cases such as the relationship between *kill* and *cause to die* where linguists would like to make strictly formal context-independent descriptions. The extension of formal analysis of this sort will certainly be of interest to pedagogical grammarians.

What is of interest to the language teacher extends into all context-dependent areas of usage beyond the confines of what is neatly describable in grammars. The ability of an educated native speaker to paraphrase utterances in his language in all kinds of contexts providing they represent plausible and familiar meanings (see Gleitman and Gleitman 1970) provides a useful model for extending foreign language proficiency. But first, the contrastive aspects should be considered, i.e., the ability of a component bilingual to render an L1 utterance in various different ways in the target language either directly or with reference to L1 intralanguage paraphrases, e.g., *pies Jana* as *John's dog*, *the dog that belongs to John*, *the dog owned by John* and so forth. This would include contextually determined paraphrases like *he belongs to him* and *the policeman's dog*. This is particularly relevant where the methodological approach adopts the view of cognitive psychologists (see Ausubel 1968) that new information should be related to old information, concepts already firmly anchored in cognitive structure. Thus the native language is not ignored but exploited as a base on which to establish the meaningful learning of target language items. The new information is linked with but at the same time distinguished from existing well-learned similar information in the learner's brain. A presentation of some L2 item may then include a congruent L1 item or an interlanguage paraphrase. L2 equivalents and intralanguage paraphrases may be supplied simultaneously or later according to the teacher's discretion. The item may then be practised using the same techniques and also tested.

The most obvious candidate for practice through paraphrase is the relatively neglected area commonly termed vocabulary. It is accepted that vocabulary is best learned in context. Paraphrases provide effective and systematic ways of doing this, teaching not only the lexical item itself but also an associated rephrasing of it to form semantically identical (or nearly identical) units. New relating lexical items are also taught. Thus in an exercise texts such as:

> John peered into the dark room and saw a small furry animal carefully licking its paw. The — stared at him and then mewed.

we have the missing item *cat* plus associated items: *furry, lick, mew*. The text might then be continued and repetitions of the three associated words used to form blank spaces in their turn. A preliminary contrastive exercise would use L1 equivalents (*pokryte futerkiem, lizać, milczeć*) to cue the answers. The learner would be using both the L1 items and the L2 context to learn the words under consideration. Another example of such a contrastive exercise might be the following, designed to teach phrasal verbs:

> After a long struggle the enemy — their position and fell back to the safety of the forest. (Wycofali się)

The learner must fill in the blank with a phrasal verb that is an interlanguage paraphrase (or loosely congruent version) of the Polish cue word capitalised at the end of the sentences. An L2 intralanguage paraphrase cue or loose equivalent (like ABANDON) might also be used of course. Care would also have to be taken to establish adequate contextualisation for items so that *replace the receiver on the hook* and *replace* as cues for the phrasal verb *hang up* would be supported in the context by mention of the word *telephone* so as not to provoke such deviant sentences as **he hung up the book he had damaged*.

Not only vocabulary but structure can be usefully dealt with using paraphrase techniques. This is not only true of the standard surface structure transformations of the active-passive type. It also proves to be relevant in, for example, the vexed area of modal meanings. Thus *it is very important that*, it is of *great importance that* as well as *it is highly probable that* may serve as L2 paraphrases of *must* and also as a basis for L1 interlanguage paraphrases (*to jest bardzo ważne*, etc.) An exercise might require that the learner read through a text using *must* wherever he finds an acceptable paraphrase of *must*. This task may be made easier by either supplying Polish interlanguage paraphrases or simply underlining (at least at an early stage) the English paraphrases. The learner will of course be remained that he must reorder the English text to accomodate *must*, as would be necessary in a text like: *He told me that* (*to jest bardzo ważne*) *I come immediately*, or *I think that* it is highly probable that *they are married*, for example.

Word ordering is itself a structural problem for Polish learners of English (and even though to a lesser extent for English learners of Polish), for example the constraints on noun premodifier word order in English (see Sharwood Smith (1975) for a fuller account). Prepositions or the so-called particles attached to verbal forms in phrasal verbs are rarely permitted in English except in ironically deviant structures relating to the language of journalism. On the other hand, Polish, especially written Polish, allows such constructions. The learner of English is often unaware of the problem and if he is, then finds difficulty in remembering. There is powerful motivation to forget in many cases because the required interlanguage paraphrase demands a decision about tense-itself a problem. Thus an utterance such as *ustalona przez Jones'a transkrypcja* may need only a reordering of the elements and a congruent translation but *uwielbiana przez tysiące aktorka* requires the learner to decide between *who was adored*, *who has been adored*, *who had been adored* in a past time context since the relative clause is obligatory in many contexts. There is no doubt that Polish learners naturally follow the Polish word order unless corrected and error analysis will show this. This is precisely what has led some methodologists to abandon the behaviourist position that was assumed by the audiolingualists, viewing L1 as a source purely of *negative* interference. It seems that learners use the native language will-nilly. A more positive approach suggests that we exploit this and guide them in their use of L1.

Any language course, any pedagogical grammar below the most general type of reference work is particularly concerned with the special demands of its "consumers". However, a general approach to the use of the paraphrase technique in teaching might involve starting with L2 contexts with L1 congruent and interlanguage paraphrases of the items and structures to be elicited (avoiding 100% translation exercises) and the gradually switch to L2 contexts with L2 equivalents and paraphrases. It is not expected that learners will all achieve the paraphrasing ability ascribed to educated native speakers with all the internal interconnections in cognitive structure this involves. But a conscious and systematic use of paraphrase must help to develop this type of integrative skill much more than many language courses seem able to do. Furthermore, specialised courses, say for translators, will naturally find the interlanguage paraphrases just as useful as those possible *within* L2, and will seek specifically to develop the skill of a "competent bilingual translator". The contribution of contrastive studies is immediately apparent. It is not that any of those techniques are really new in language teaching, but advances in systematic comparisons between Polish and English that lead to explicit statements about how the two languages relate semantically and syntactically can help the teacher and materials writer enormously in systematizing their own approaches to language description which they wish to construct so as to facilitate meaningful learning.

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DERIVATION OF INFINITIVES IN ENGLISH AND POLISH[1]

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Infinitivalization is one of the types of nominalization in which the sentential origin seems apparent. If paraphrase relations hold between different types of nominals, they can be captured by allowing alternative transformations to operate on the underlying structure with the identical semantic input [2], as in:

(1) That people shoot animals seems to be less than human — FACTIVE
(2) People's shooting animals seems to be less than human — GERUNDIAL
(3) For people to shoot animals seems to be less than human — INFINITIVAL

In the Polish equivalent sentences the overt subject of the nominals will be present only in the first two cases, while for the infinitival type it seems to be only covertly [+Anim, +Hum], with this feature specification occurring in the structure underlying the subject of the infinitive. Cf.:

(1a) To, że ludzie zabijają zwierzęta wydaje się nieludzkie
(2a) Zabijanie zwierząt przez ludzi pracy wydaje się nieludzkie
(3a) Zabijać zwierzęta wydaje się nieludzkie

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[1] This work is sponsored by the Ford Foundation and the Center for Applied Linguistics, Arlington, Virginia.

[2] There are examples of constructions involving nominalizations whose semantic interpretation changes depending upon the type of nominalization (see ex. 45–49 in this paper). In such cases it is obvious that their underlying structures cannot be identical. The Kiparskys (1971 : 365) go still further observing that "there is good reason to posit a number of different base structures, each mapped by transformations into a syntactic paradigm of semantically equivalent surface structures".

In the present paper, conditions relevant for the derivation of some classes of infinitives in English and Polish will be discussed. The above examples would suffice to notice that the infinitival structures in both the languages could have a similar initial route of derivation, they are different, however, in respect of some further derivational constraints. It can be further observed that the description of the infinitive derivation concerns questions extracted from a whole set of interrelating problems connected with nominalizing processes, hence it would not be possible to exhaust all the subject in the present paper, as it involves many complex problems both on the level of syntax and semantics.

It is a well-known fact that finite predicates may be treated as a result of person and number agreement between subject and verb, while non-finite forms, infinitive among them, occur when agreement does not apply. The reasons for the lack of agreement, which will be pursued now, may be due to two phenomena in English (cf. the Kiparskys 1971: 356–7): either the subject of an embedded sentence is transformationally removed, i.e., deleted or raised, or it is placed into an oblique case.

There are two ways to perform *subject removing*, first, subject deletion under identity condition, and, second, subject raising (for details of derivation see Stockwell (1969: 527–624).

Subject deletion can occur both in English and Polish under the condition of identity between NP's in the matrix and constituent clauses followed by the erasure of the identical NP from the embedded clause with the simultaneous converting the verb in the constituent sentence into infinitive. In the structures underlying actual utterances employing this type of infinitive, actual subjects of the verbs are postulated, e.g.:

(4) I decided to go — I decided+(I) go
(4a) Zdecydowałem się pójść — ja zdecydowałem się+(ja) pójść

In the above couple of examples there are identical agents in the matrix and constituent clauses.

(5) I allowed John to go — I allowed John+(John) go
(5a) Pozwoliłem Janowi odejść — ja pozwoliłem Janowi+(Jan) odejść

In these examples the identity holds between the indirect objects of the matrix and the agents of the constituent clauses.

P. Rosenbaum (1965: 10, 29 ff.) proposed an erasure principle for English, which allows to delete the subject of the embedded sentence if it is identical to the nearest NP that neither dominates nor is dominated by the embedded sentence. Examples such as (6) and (6a) below contradict this principle. This has been noticed by R. Rothstein (1966 : 38), who provides a number of counter-examples in the Polish material, which suggest parallel counter-examples for English. Compare (4, 4a) and (5, 5a) with (6, 6a):

(6) Jan obiecał Marii przyjść w niedzielę — Jan obiecał Marii+ (Jan) przyjść w niedzielę

(6a) John promised Mary to come on Sunday — John promised Mary (John) come on Sunday

The co-referential nouns in (6, 6a) are not the nearest NP's in terms of a derivational tree, though both of them function as subjects of the respective sentences. Considering the matrix verb to be the main factor determining which NP is relevant to deletion Rothstein (1966:42) proposes that an NP of a constituent sentence be deleted, if it is identical to the object of the verb dominating the complement, if that verb takes an object (understood very broadly), otherwise to the subject of that verb. Stockwell et al. (1969 : 579) further specify the NP's relevant to deletion. They state that "there are two classes of such coreferential nodes: the transformation of EQUI-NP-DEL must inspect a structure and determine whether the subject of the embedded sentence is identical with a dative, or if there is no dative then with an agent in the matrix sentence "(1969 : 579). The majority of the Polish constructions with infinitives seems to be derived, as will be seen in the discussion below, according to the similar procedure.

Some of the above infinitives can be derived from the structures identical to those underlying gerundial nominals preceded by prepositions: compare (4, 4a) to (7, 7a) and (5, 5a) to (8, 8a):

(7) I decided on going

(7a) Zdecydowałem się na pójście

(8) I allowed John for smoking

(8a) Pozwoliłem Jankowi na palenie papierosów

These infinitival gerunds, however, have only their surface form in common with factive nominals in English and Polish, being otherwise different both in their origin and their derivational history (the Kiparskys 1971 : 357). Cf. (7)–(8a) with the following:

(9) His smoking gets on my nerves — (The fact) that he smokes gets on my nerves

(9a) Jego palenie działa mi na nerwy — (Fakt), że on pali działa mi na nerwy[3]

Subject raising

This group of infinitives is distinguished in English, basing their derivation on the criterion of factivity (the Kiparskys 1971). If a sentence carries with it *the presupposition* that the embedded sentence expresses a true proposition, the predicate of the matrix is considered to be factive. If it is not the presupposition but *assertion* of the truth of the proposition expressed in the clause, the predicate of the matrix is non-factive. Cf.:

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[3] The subject was partly discussed in B. Lewandowska (1975).

FACTIVE

(10) It is *significant* that he has been found guilty
(10a) Jest *istotne*, że dowiedziono mu winę

with the grammatical equivalent:

(10$_1$) The fact that he has been found guilty is significant
(10a$_1$) Fakt, że dowiedziono mu winę jest istotny

vs. NON-FACTIVE

(11) It is *likely* that he has been found guilty
(11a) Jest *prawdopodobne*, że dowiedziono mu winę

and ungrammatical

(11$_1$) *The fact that he has been found guilty is likely
(11a$_1$) *Fakt, że dowiedziono mu winę, jest prawdopodobny

The semantic distinction between factives and non-factives, then, exists both in English and Polish. In English, however, it has some further reaching consequences on the syntactic level than in Polish. In both the languages the factives can have as their objects the noun *fact*/(*fakt*) with a *that*/(*że*) - clause (10$_1$, 10a$_1$), or gerund[4].

(10$_2$) (The fact of) his having been found guilty…
(10a$_2$) (Fakt) dowiedzenia mu winy…

In English, however, there is a distinctive class of infinitival constructions permissible essentially with non-factive predicates. They are derived through shifting (raising) the subject of the embedded sentence to the position of either the subject (12), or object (13, acc-cum-inf), converting simultaneously the verb phrase of the constituent clause into an infinitival phrase. In Polish, on the other hand, the operation of subject raising is extremely rare (see the footnote[5]).

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[4] A comparison between some grammatical categories that can be expressed by gerundial and action nominalizations in Polish and English has been presented in B. Lewandowska (1975).

[5] There is only one verb I could think of, allowing subject raising to subject in Polish. It is the verb *wydawać się* (seem):

1. Wydaje się, że *chłopiec* rozumie —
Chłopiec wydaje się rozumieć

(12) It is sure that John will get up early —
John is sure to get up early
(13) Non-factive
I believe that Glenda is an artist —
I believe Glenda to be an artist
(14) Factive
I regret that Glenda is an artist —
*I regret Glenda to be an artist

The Polish language, as a rule, will not employ infinitives in such cases, while similarly to English, sentential objects introduced by *że-* complementizer may be used in all corresponding sentences, no matter whether the predicate in the matrix is factive or not:

(12a) Jest pewne, że Janek wstanie wcześnie
(13a) Wierzę, że Glenda jest artystką
(14a) Żałuję, że Glenda jest artystką

Placing the subject of an embedded clause into the oblique case

P. Rosenbaum (1965) proposed that in the process of generating infinitivals in English, *for-to* complementizers be placed before the embedded clause, triggered by the presence of the idiosyncratic item *for* on the head of sentential components. The Kiparskys (1971) claim that this item depends on the presence of the feature [+EMOTIVE] on the head item. Their definition of emotivity reads as follows: "Emotive complements are those to which the speaker expresses a subjective, emotional, or evaluative reaction" (1971: 363). The criterion of emotivity comes across that of factivity in the Kiparskys' formulation and both of them determine to a large extent the surface syntactic form of an utterance. The Kiparskys' observation has been incorporated into the grammatical model of English by Stockwell et al. (1969:41) and captured by strict-subcategorial features [+/−FACTIVE], [+/−EMOTIVE], specifying the type of predicate, for instance, *important*, *tragic* — [+FACT+EMOT], *well-known*, *clear* — [+FACT−EMOT], *unlikely*, *urgent* — [− FACT+EMOT], *likely*, *seem*, *predict* — [−FACT−EMOT]. One group of the predicates (*well-known*, *seem*) can take embedded clauses in the subject position, the other one (*eager*, *predict*) can co-occur only with an object clause.

1a. It seems that the boy understands —
The boy seems to understand
2. Wydaje się, że pada *deszcz* —
?(*Deszcz*) wydaje się padać
2a. It seems there is raining —
There seems to be raining

In the examples with the overt item *for* the Kiparskys assume that its source is the transformational marking of the subject in complements of emotive predicates with the item *for*, which automatically attaches to it the status of the oblique case, with the infinitival form being its consequence, as in:

(15) It is tragic for her to leave him [+FACT+EMOT]
(16) It is unlikely for him to have kissed her [−FACT+EMOT]

It can be noted that the base structure underlying infinitival factives (15), is also a source for factive *that*-clause as well as a factive gerundial construction:

(17) (The fact) that she has left (is leaving) him is tragic
(18) (The fact of) her leaving (having left) him is tragic

From the proposal by P. and C. Kiparsky, then, a conclusion can be drawn that the basic structure underlying (15) as well as (17) and (18), could be considered to be, very roughly, of the form:

(19) the fact [she AUX leave him] is tragic

Such a representation, however, as it seems to the author of the present work, underlies only one possible interpretation of (15), namely, where ***her*** in this sentence specifies only the subject of the embedded clause — the fact that she has left him may be tragic for her parents, children, friends, anybody. In the opinion of some speakers of English, however, sentence (15) may be also understood (some suprasegmental differences would be associated with this too) as:

(20) the fact [she AUX leave him] is tragic for her

whose superficial structure would be a result of identical NP's (matrix object = constituent subject) deletion, and not caused by the oblique case marking.

That such varying interpretations exist in English with some predicates may be proved by considering another pair of examples:

(21) The best thing would be for you to tell everybody
(22) The best thing for you would be to tell everybody

The paraphrase relation does not seem to hold between the above sentences Only the first of the couple may be thought of as being derived from the Kiparskys' oblique case marking and having the following as a source structure:

(21_1) [you AUX tell everybody] would be the best thing

The item *for* occurring in the surface structure of (21) will undoubtedly mark the subject of the embedded infinitival clause and act there as a conjunction, or clause introducer rather, than a preposition (cf. also Quirk et al. 1972:739). The second case, (22), however, seems to include the prepositional phrase *for*+NP in the underlying structure, which can be, then, presented as:

(22_1) [you AUX tell everybody] would be the best thing for you

Thus the surface structure with the infinitival form in (22), would be in this case, simply a result of Equi-NP deletion. The analysis of predicates allowing such ambiguity will have to be carried out separately.

The above conclusion appears to be of some importance for our present contrastive analysis. In Polish there seems to occur a class of infinitival constructions equivalent in structure to (20) and (22), while no direct infinitival equivalents of (19) and (21) can be encountered. The analysis of the Polish material shows only very few cases of oblique case marking proper.

The first group is characterized by the presence of a prepositional phrase *dla* NP in the surface structure:

(23) Jest tragedią dla niej odejść od męża
(24) To ważne dla dziewczyny, (aby) być dobrze ubraną

The covert subject of the embedded sentence is identical to the NP in the PrepP present in the matrix. The subject of the embedded clause is overtly indicated by the feminine ending of the Past Participle *ubrana* (dressed), referring to the NP *dziewczyna* (girl).

Another couple of examples:

(22a) Najlepszą rzeczą dla ciebie byłoby powiedzieć wszystko
(21a)? Najlepszą rzeczą byłoby dla ciebie powiedzieć wszystko

corresponding to English sentences (21, 22), shows a characteristic inseparability of the predicative NP and the respective PrepP, functioning here as an object of the matrix predicate.

English *for-to* constructions with the oblique case marking are most frequently expressed in Polish (and some other Slavic languages) as embedded clauses introduced by complementizers *aby/żeby* (sometimes present also with infinitival constructions-see ex. (24)), or *że*:

(25) Najlepiej dla ciebie byłoby, *abyś/żebyś* powiedział wszystko
(26) Było to tragiczne dla niej, *że* musiała opuścić męża

— an alternative possibility besides infinitival constructions, vs.:

(17a) Fakt, że opuściła męża jest tragiczny

which is a translation of (17) and cannot acquire an infinitival form.

For the sake of interest compare also two examples of sentences corresponding to English infinitival constructions in Russian, introduced by complementizers чтобы, which, similarly to Polish, requires the Past tense form of the embedded predicate, and что:

(27) Невероятно *чтобы* кошка была такая учная
(28) Такая радость, *что* он наконец нам ответил

An interesting point here is that the majority of the constructions classified as a product of Equi-NP deletion and having the PrepP in the underlying structure, can also co-occur only with [+EMOTIVE] predicates in Polish:

(29) Jest $\left\{\begin{matrix}\text{niemożliwe}\\ \text{ważne}\end{matrix}\right\}$ dla Tomka, (aby) wstać wcześnie jutro rano
(29a) It is $\left\{\begin{matrix}\text{important}\\ \text{unlikely}\end{matrix}\right\}$ for Tom to get up early tomorrow

vs. [—EMOTIVE]

(30) *Jest $\left\{\begin{matrix}\text{znane}\\ \text{jasne}\end{matrix}\right\}$ dla Tomka, (aby), wstać wcześnie jutro rano
(30a) *It is $\left\{\begin{matrix}\text{well-known}\\ \text{clear}\end{matrix}\right\}$ for Tom to get up early tomorrow

Some further derivational constraints, some-characteristic only of the Polish language, such as the obligatory subject position of the embedded infinitival construction, some others more general e.g. the subcategorial feature [+Human] on the head noun, seem to be involved of the process in the infinitival derivation to block the ungrammatical strings such as:

(31) *Otworzyłam drzwi dla nich, aby wejść
in the sense of:

(32) Otworzyłam drzwi, aby (oni) weszli
being equivalent to Oblique case marking in English:

(32a) I opened the door for them to come in,

and questionable: (33) *Jest ważne dla krzesła, kota ... etc.

If the analysis proposed above is correct, the interpretation of infinitives under discussion is identical to that suggested in the first part of this paper (Subject deletion), and involves the erasure of coreferential subjects in the embedded clauses[6]. The Oblique Case marking, so characteristic for the derivation of *for-to* nominals in English, does not seem to play any part in the derivation of Polish infinitivals occurring in the clauses with *dla* NP prepositional phrases. However, there can be encountered in the Polish language certain constructions that may arouse some doubts as to such a conclusion in other cases. The discussion of such cases will be the final point in this paper.

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[6] Different ways of expressing the subject of nominalized constructions deserve closer attention (e.g. To nieładnie *z jego strony* mówić takie rzeczy; czytanie *Janka*, etc.) and will be discussed in one of my subsequent papers.

The constructions that will be analysed now contain as a characteristic marker an infinitival form and an NP in the Dative case. The examples can be grouped in the following subclasses:

I (34) Trudno mi żyć w ten sposób

II (35) Mnie tu ani żyć, ani umierać
(36) Sam, choćbyś był Waligórą, nie mierzyć ci się z tą górą
(37) Tobie iść do klasztoru, nie wychodzić za mąż
(38) Po co ci sobie zawracać tym głowę?

III (39) Wystarczy nam znaleźć rozwiązanie
(40) Nie wypada nam palić tutaj
(41) Nie przystoi (uchodzi, godzi się) wam zachowywać się w ten sposób
(42) Czy wolno uczniom palić?

The sentences were taken from different sources[7], and though some of them may be considered somewhat archaic (esp. (37) and (41)), they are typical representatives of this class of infinitival constructions in Polish.

Group I is the least controversial subclass in the above set of sentences; when paraphrased it shows a structure similar to that of the examples analysed in the preceding section of the paper:

(34_1) (It is difficult for me to live in this way).
Jest rzeczą trudną dla mnie, (aby) żyć w ten sposób —
[ja AUX żyć w ten sposób] jest trudną rzeczą dla mnie

The substitution of the adjective by an adverb in the predicate is also historically motivated, which is a very interesting evidence in favour of our analysis. (For the discussion of this problem see S. Szober 1931 : 85–87). Transformations operating on this string will perform Equi-NP deletion assigning the infinitival marker to the verb of the embedded sentence at the same time, as well as the optional converting of ADJ N into the adverb ***trudno*** followed either by a Prep NP or an NP in the Dative case. The complementizer *żeby/aby* may occur only if the NP is preceded by a preposition. The link verb *być* (to be) (*trudno mi jest żyć, trudno mi było żyć*) can be optionally deleted only if it occurs in the present tense form, otherwise it is retained.

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[7] Mainly from Polish grammars such as Z. Klemensiewicz (1961). One example, (36), from E. Szelburg-Zarembina (1972) "Baśń o szklanej górze", Lublin: Wyd. Lubelskie. Some English examples from T. Grzebieniowski (1959).

Constructions similar to that in (34) occur in Polish fairly frequently with such predicatives as: *przyjemnie*, *ciężko*, *lekko*, *słodko*, etc., allowing an infinitival clause as their subject.

To find an adequate semantic interpretation and a testable history of the derivation of sentences in the second group is a difficult task. Such constructions, much more frequent in the older stages of development of the Polish language than in contemporary Polish, have certain limited range of occurrences. The usage of the Dative case, only in one case can be compared to that of subclass (I), other paraphrases do not show the similarity:

(35$_1$) (It is not the place for me either to live or to die)
To nie jest miejsce dla mnie ani do życia ani do śmierci
or
Ja *nie mogę* (umiem) tu ani żyć, ani umierać

(36$_1$) (Even if you were very strong, you wouldn't be able to climb (contest) this mountain)
Nawet gdybyś był Waligórą, *nie mógłbyś* (nie byłbyś w stanie) mierzyć się z tą górą

(37$_1$) (You should rather go to the nunnery than get married)
Ty *powinnaś* iść do klasztoru, a nie wychodzić za mąż

(38$_1$) (Why are you to bother about it?)
W jakim celu *masz* (musisz) zawracać sobie tym głowę?

The distribution of the infinitival complementizer in all the examples above does not seem to be connected to any of the derivational processes mentioned earlier in this paper, but is associated somehow with the occurrence of a modal preceding the main verb in the basic structures underlying the sentences. The appearance of a modal in the basic structure of a sentence could cause an optional assignment of the Dative case marking to the "deep" subject of the construction with the simultaneous infinitival status attached to the verb, and the modal verb deletion. This is only a non-technical attempt at explaining some facts, but is connected in a very interesting way with a hypothesis offered by some linguists (e.g. Z. Vendler 1968 : 56, J. Thorne, lectures delivered in Poznań, 1973), aiming at the explanation of the nature of infinitive. The distribution of infinitival complementizers in English (also in Polish, Russian, and possibly other languages), is connected with the fact that clauses which allow the infinitivalization of the verb are in a non-indicative mood, stating more precisely, the infinitive would be the result of a subjunctive or subjunctive-equivalent (Z. Vendler 1968). This fact should be accounted for in an adequate grammatical model, and only then, sentences like those quoted above, as well as all infinitival constructions, will be more readily interpreted and explained.

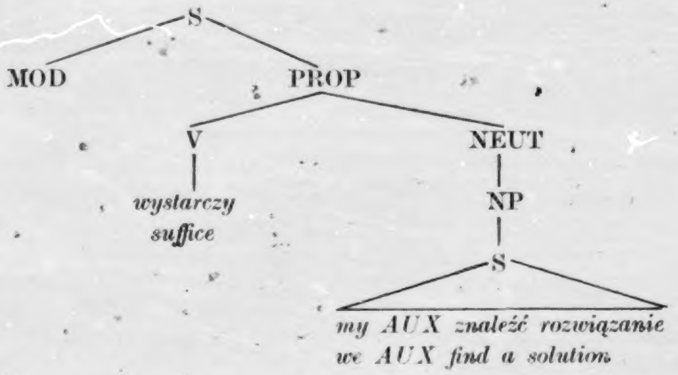
The last class of Polish infinitival constructions with the Noun in Dative bears a close resemblance to the English class of infinitival structures whose subjects are placed into the oblique case. It seems to us that there is one-to-one correspondence between such sentence as (39) and the English:

(39a) For us to find a solution will suffice

Since the analysis of similar cases in English is familiar to us, we shall try to examine the Polish example more closely. Two different interpretations concerning the derivation of such infinitival constructions can be suggested.

The first approach assumes that the lexical item in the Dative case (*nam, wam, Marysi, chłopcu*) is the subject of the infinitive, generated from the embedded clause, where it was assigned the Dative case marking. The assignment of the Dative case marking is caused by the presence in the matrix clause of one of the verbs mentioned in subclass III. These operations would work analogically to those conditioning the generation of *for-to* complementizers in English. In English the rules start operating if the predicate bears the feature [+EMOTIVE], which, postulated for Polish, would not bring about the expected generalizations, for the scarcity of material. In such an interpretation, the P-marker associated with (39) and (39a) can be represented as a tree-diagram of roughly the following form:

(43)



If we consider sentence (40) according to that pattern, its underlying structure (in a simplified form) would be:

(40_1) [my AUX palić tutaj] nię wypada

This string can undergo nominalization of *żeby-S* type to yield:

(40_2) Nie wypada, żebyśmy palili tutaj or infinitivalization, caused by the presence of the verb *wypada* in the matrix predicate, which would assign a Dative marking to *my* in (40_1), as well as the appropriate from of the verb *palić*.

Another variant of (40) can be also encountered, though its grammatical correctness is questioned by some Polish native speakers:

(40_3) ?Nie wypada nam, żebyśmy palili tutaj

Its degree of deviancy seems to be so low (the repeated item *nam*-żebyś*my*) that the sentence is considered grammatically correct by quite a number of Polish speakers. To the author of the present paper the sentence is stylistically awkward, which can be explained on the following ground: the item *nam* in (40_3) can be treated as a secondary subject marker, generated additionally in the structure underlying (40_2), by analogy to: *Nie wypada nam palić tutaj*. This can be also supported by a total unacceptability of such constructions whose matrix and constituent clauses contain non-coreferential Nouns:

(44) *Nie wypada *nam*, $\left[\begin{array}{l}\text{żeby}\textit{ście}\\ \text{żeby } \textit{Janek}\\ \text{żeby } \textit{oni}\\ \text{etc.}\end{array}\right]\ldots$

The above hyphothesis seems to work also with such predicates as *przystoi*, *uchodzi*, as well as *wolno*, *szkoda*, *pora* (Cf. *Szkoda nam wychodzić tak wcześnie*, *Szkoda, żebyśmy wychodzili tak wcześnie*, *?Szkoda nam, żebyśmy wychodzili tak wcześnie*). Also the behaviour of the lexical item *wystarczy* provides some additional evidence in favour of the proposal of subject marking with Dative.

In order to follow the argument a set of sentences with the verb *wystarczy* and nominalized embedded clauses will be given below, and the coreferentiality of the NP's present there will be discussed.

(45) Wystarczy nam znaleźć rozwiązanie
(46) Wystarczy, że znajdziemy rozwiązanie
(47) Wystarczy nam, że znajdziemy rozwiązanie
(48) Wystarczy nam znalezienie rozwiązania
(48) Wystarczy znalezienie rozwiązania

The above examples confirm, first of all, a hyphothesis allowing distinct underlying structures to be a source of different types of nominalization. Example (45) seems to us ambiguous between (46) and (47). In both the cases, however, it has a different interpretation than either (48) or (49). In (47), (lit.) *It will suffice us that we find a solution*, *nam* (us) functions as an object to *wystarczy*, while in (46) the object in this sense is not overtly mentioned at all. The object of *wystarczy* in the sense of *nam* in (47) does not have to be coreferential with the subject of the embedded sentence:

(50) Wystarczy *nam*, że znajdziecie rozwiązanie
(50) Wystarczy *nam*, że znajdą
Janek znajdzie
etc.

(It will suffice *us* that *you/they/John*... etc will find a solution)

Notice, however, that when the embedded sentence functions not as a subject, but e.g., an adverbial of result, this coreferentiality is an obligatory constraint (51, 52, 53). The occurrence of the complementizer *aby/żeby* is also significant in this case— it introduces the clause expressing the result of an activity pointed out in the matrix clause, in which a sufficient reason of such results has been indicated (for further discussion see Misz 1960: 42 ff13):

(51) Ten eksperyment wystarczy *nam*, aby znaleźć rozwiązanie can be paraphrased as:

(52) Ten eksperyment wystarczy *nam*, aby*śmy* znaleźli rozwiązanie vs. ungrammatical:

(53) *Ten eksperyment wystarczy *nam*, aby*ście* znaleźli rozwiązanie
aby *Janek* znalazł
etc.

Compare (53) with grammatical (50) and ungrammatical ex. (44) with *wypada* and other verbs of subclass III).

Proceeding further with the analysis we come to the examples with embedded sentences in the form of gerundial nominals. In sentence (48) it is not overtly specified who should find a solution, though the fact that *finding a solution will suffice us* is precisely expressed. (Cf. the latter with the English (*the fact of*) *our finding a solution will suffice*, which can be translated only as (45) or (46) into Polish.)

The category of unspecified or general person[8] is also present in sentence (49), where neither the subject of the embedded clause nor the object of the matrix verb, have been overtly expressed (=*finding a solution will suffice*).

The conclusion that can be drawn from the analysis of the above mentioned constructions seems to confirm the ambiguity of *nam* in (45). On one reading it is only the subject marker of the infinitive[9], while on the other one — the indirect object of the verb, being retained after the infinitival subject deletion. The analysis postulates, then, Dative Case Marking in such infinitival constructions in Polish as the first reading of (45), though, as we realize, the arguments should be tested on all the verbs in question, because of their different nominalization patterns.

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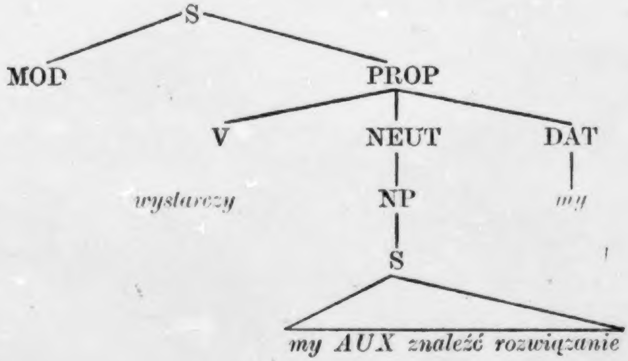
[8] The analysis of infinitival constructions with unspecified or general subject in Polish and English will be presented in the paper mentioned in footnote 6.

[9] That the NP in the Dative case could function in Polish as a subject of the construction with the infinitive is also a historical fact. See Old Polish and Middle Polish examples, for instance, in A. Kałkowska et al. (1973:15), such as *Miano sobie za nic* uczyć się *języka ojczystego* urodzonym Polakom.

An alternative hyphothesis that can be suggested for the derivation of infinitival constructions in subclass III, would depend mostly on Equi-NP deletion. The P-marker associated with (45) in this interpretation, would be represented as a following tree-diagram (cf. (54) with (43)):

(54)



In such a case, however, it would not be possible to account for the ambiguity of (45), as the processes responsible for its derivation in any of the two postulated interpretations would have to be identical. The presence of the two items *my* in the underlying structure would have to be assumed, one — functioning as the subject of the embedded clause, and the other — underlying the indirect object of the verb in the matrix clause. Having established the coreferentiality of *my* (*we*) in the matrix and *my* in the embedded sentence, the operation of deleting the subject of the embedded clause could be performed, which would cause the infinitivalization of the main verb. Dative case would be the result of the indirect object position of *my*, causing its surface form to be *nam*. Such a route of derivation may be postulated for sentence (47) and this reading of (45) which can be paraphrased as (47), to accept it, however, in the case of (45) corresponding to the interpretation of (46), would mean to skip all the argument presented before.

This paper cannot be finished with some decisive conclusions concerning the derivation of all types of infinitive in Polish. It can only be meant to point at certain phenomena in the Polish language as contrasted with English, which, when tested on a number of examples, can lead to some well-motivated conclusions.

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SYNTACTIC AMBIGUITY AND THE TEACHING OF WRITTEN ENGLISH TO ADVANCED POLISH LEARNERS – NORM AND USAGE

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Third in a series presented under the common heading "Syntactic ambiguity and the teaching of written English to advanced Polish learners", this paper is a continuation of my earlier investigation. Consequently, the analysis is based upon the assumptions which wer outlined in part one (Muskat-Tabakowska 1974) and then reformulated in part two (Muskat-Tabakowska 1975).

Parts one and two dealt with some selected examples of syntactic ambiguity in written work produced by advanced Polish learners of English (students of the Department of English of the Jagellonian University). However, while carrying out an analysis of these materials I have been more frequently coming across instances of what will be most adequately described as 'extralingual ambiguity', i.e., discrepancy between the meaning of a given sentence as intended by the writer and the meaning actually imposed upon the reader, due to an intervening error of some sort. Such sentences may easily seem grammatical and will be often considered fully acceptable; the misunderstanding is discovered and the error responsible for its occurrence revealed only after the relevant context (linguistic or extralinguistic) has been analysed.

The existence of such camouflaged errors has long been acknowledged; cf. for example S. P. Corder (1967 : 168): "an utterance which is superficially non-deviant is not evidence of a mastery of the language systems which would generate it in a natives peaker, since such an utterance must be semantically related to the situational context".

A preliminary analysis of the sample materials makes it possible to formulate the following hypotheses:

1. on advanced stages of language learning 'extralingual ambiguity'

on the level of syntax is directly related to high syntactic complexity of sentences;

2. certain types of 'extralingual ambiguity' are systematic, i.e., they reflect the learner's transitional competence;
3. 'extralingual ambiguity' can occur as a result of the interference of the learner's mother tongue or/and excessive normative teaching;
4. 'extralingual ambiguity', like other types of linguistic error, provides a profitable starting point for contrastive analysis, which, though partially discredited as a reliable method of error prediction, can be legitimately applied when looking for an explanation of errors that have been actually attested. It can also supply valuable insights concerning remedial procedures.

The sample analysis presented informally further in this paper resulted from purely practical considerations. (1) below comes from a summary of an essay on life in tropical countries; it was written by a first year student and seems fairly typical for written performance of Polish learners after a standard four-year secondary school course of English:

1. People can get everything, which is necessary to live without hard work.

Apart from its semantic contents, syntactic considerations imply the following interpretation of (1). The presence of the comma which terminates the main clause excludes the possibility of interpreting the relative clause as a case of restrictive modification on the second NP (cf. **People can get everything, that is necessary to...*); for a discussion, see e.g. Stockwell et al. (1968:448). Moreover, the possibility of nonrestrictive NP modification is ruled out for semantic reasons, as it seems to be an inherent property of the universal pronoun *everything* that it cannot constitute "the head [that] can be viewed as a unique or as a member of a class that has been independently identified" — a condition necessary for nonrestrictive modification (Quirk et al. 1972:858). Hence, the relative clause in (1) can be unambiguously interpreted as a nonrestrictive appositive with a sentential antecedent (cf. Quirk et al. 1972:871 ff., Stockwell et al. 1968:448).

Thus, (1) could be considered grammatical only if semantically equivalent to, e.g.

1a. People can get everything, and being able to get everything is necessary to live without hard work.[1]

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[1] Semantic acceptability of (1a), however, has been questioned by most of my native informants, who considered the sentence to be 'rather meaningless, with a comma placed like this'.

Yet it is only the consideration of the *intended* meaning of (1) (easily inferred from the argument presented in the original essay on which the student's summary was based) which makes it obvious that the sentence is in fact deviant in several ways. These errors become evident when one compares (1) to (1b) below, which is the (contextually) correct version of (1), offered by one of my British informants:

1b. People can, without hard work, get everything $\begin{Bmatrix}\text{that}\\ \text{which}\end{Bmatrix}$ they need to live on.

One could list the following errors:

1. Awkward wording. *Everything which is necessary* was classified as 'a rather mild error of style'. Though judged as an example of interference from Polish, alone it was not considered to affect the acceptability of (1).
2. One-word verb used instead of the corresponding prepositional verb. Correction was considered necessary in view of the semantic import of (1): the obviously implied meaning being 'to depend upon for support rather than meaning 'to be alive' in a more general sense. It may be worth noticing at this point that using the prepositional verb would also reduce the possibility of ambiguous reference of the adverbial phrase in (1a), cf.:

1c. People can get everything that they need to live on without hard work.

which is a less formal version of (1b), acceptable in spoken English.

Errors listed under 1. and 2. are both errors of style and, as such, they are par excellence token- and not type-oriented (for a discussion, see Muskat-Tabakowska 1974). Thus they cannot be easily classified as belonging to one or other category of systematic errors.

3. Faulty insertion of the comma, which separates the main clause from the restrictive relative clause—an error which appears frequently in the written work of students of junior years. Apart from sentences which, due to an analogous error, become clearly ungrammatical, cf.:[2]

2. * Machines were the most important things, that ancient man had not got.
3. * An allophone is a phone-type, which does not differentiate between meanings of words.

I found in the students' compositions instances of sentences whose constitutent clauses might be interpreted (semantically) as alternatively restrictive or nonrestrictive, eg :

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[2] All examples — unless specified otherwise — come from précis pieces written by my first year students.

4. ? Ancient man had not got machines, which do nearly everything for mankind in our times.,

cf.:

4a. Ancient man had not got (the) machines that do nearly everything for mankind in our times.

4. Ambiguous reference of the adverbial phrase *without hard work*: misinterpretation results from associating the adjunct with the right-most VP in (1a), which accounts for the possibility of postulating the existence of

1d. People live without hard work as
an element of the deep structure of (1a).

Although no regular attempt was made to collect a representative sample of material which might confirm this hypothesis, it seems that potential ambiguity, resulting from unclear reference of adjuncts, is frequent in written performance of Polish students of English, who tend to produce sentences of high syntactic complexity (i.e., including numerous VP's). If those instances go unnoticed, it is because potential ambiguity is frequently resolved by extralinguistic factors, cf., e.g.:

5. Modern man has numerous advantages which his ancestors lacked due to the use of machines.

(5) is considered nonambiguous as semantic considerations prevail over the requirements of syntactic rules; compare, however, the ambiguous

5a. Mr X has numerous advantages which Mr Z lacks due to his old age.

It must be admitted that — in cases in which semantic import of a sentence ensures its unambiguous interpretation — this type of potential ambiguity can be also found in the written language of native speakers, especially in informal, journalistic prose, e.g.:

6. If I put every project question I'm asked on the page, there'd be no room for anything else (from the 'Problem Page' in a girls' magazine).

Without the help of contextual (and/or situational) factors, however, this type of ambiguity may go unnoticed only because syntactic requirements impose upon the reader a single — though not the intended one! — interpretation, cf.:

7. People find peculiar satisfaction in creating something beautiful in every detail.

the intended meaning of which is shown in

7a. People find peculiar satisfaction in creating a complete and finished article which is beautiful.

It must be noticed that the surface structure of (1), (2) and (3) allows for a spoken realization which would render all these sentences grammatical; it is only the function of the commas in evoking the unacceptable intonation patterns that makes them erroneous. On the other hand, (4), (5) and (7) would have to be disambiguated in speech, as division into tone groups implies the choice between restrictive and nonrestictive modification (in (4)), as well as an indication of the reference of adverbial phrases (in (5) and (7)).

Consequently, errors listed under (3) and (4) above might result either from transfer of errors of intonation from spoken to writen language, or else from inadequate knowledge of the conventional aspect of punctuation rules. Moreover, in their written representation, (4), (5) and (7) are erroneous only because of what I propose to call 'extralinguistic ambiguity'. From the point of view of a language teacher this type of errors is especially difficult to cope with: the learner must be made aware of the fact that what is ungrammatical and/or unacceptable in a given context, is a legitimate product of applying a certain set of rules, and would — under different circumstances — be explicitly required. Simple provision of a contextually correct form can in such cases lead to 'unteaching' of a rule which had already become part of the learner's competence, or else, to blocking the way towards his forming and testing of new hypotheses.

As the problem seemed rather typical of the students' performance, it became an incentive for further practical investigation, which resulted in the following observations.

Interestingly enough, with senior students the instances of 'surplus' commas in sentences including restrictive relative clauses was noticed to decrease rapidly, and — what is more — inadequate punctuation (i.e., the lack of commas which should cut off nonrestrictive modifiers or subordinate clauses of other types) became much more frequent. A pilot study of a set of 46 written summaries produced by first year students as a part of the requirements for the annual examination in practical use of English resulted in the following data:

Table 1[3]

The total number of 'comma mistakes'	89
Inadequate punctuation (omission of comma)	76
Superfluous punctuation (unnecessary commas)	13

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[3] These results agree with an interesting statistical report presented in Wyatt (1973 : 177); this might suggest a more universal character of this type of error.

Next, the punctuation of relative clauses was investigated (only those were considered which were nonreduced and had the relative pronoun overtly present in the surface structure). The results are given below:

Table 2

	With commas	With incomplete punctuation	Without commas
Restrictive* clauses	3	–	10
Nonrestrictive clauses	8	2	16
Total	11	2	26

* Relatively small number of restrictive clauses results from the fact that cases involving deletion of relative pronoun were not considered.

Out of the total of 39 relative clauses, 18 were punctuated correctly (8 nonrestrictive and 10 restrictive). Among the remaining 21 there were only 3 cases of superfluous punctuation of restrictive clauses and 16 cases of omission of commas that cut off nonrestrictive clauses. In the 2 cases of 'incomplete' punctuation the second of the two commas was missing.

Thus, out of the 13 cases of superfluous punctuation (Table 1) only 3 were cases of restrictive relative clauses. By no means could it be maintained that these results have a definite scientific value. Any statistic study would require a more systematic investigation and more sophisticated methods[4]. I think it justified, however, to use the data as a basis for formulating the following hypotheses:

1. at the less advanced stages of learning the rules[5] of punctuation of restrictive and nonrestrictive relative clauses show a high degree of interference from Polish;

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[4] For example, I am fully aware of the fact that the choice of structures used in my materials was to a certain extent imposed upon the students by the contents and structure of the original passage.

[5] As far as one can apply this term to a set of what would be more justifiably called 'tendencies' or 'regularities' (cf. e.g. Quirk et al. 1972: 1060). In the case presently under consideration, however, the term 'rule' can be legitimately applied, as the use of comma is today in a great extent conventional (even though in Polish it is more so than in English; cf. Przylubscy 1973 : 22). In the present discussion I make no reference to other punctuation marks — the dashes and parentheses — which can be used instead of commas to cut off nonrestrictive relative clauses. The same alternative exists in Polish, though the comma is more frequently chosen in both languages. Whatever the choice, however, my basic argument remains unchanged.

2. teaching techniques and learning strategies result in overgeneralization of these rules at later stages of learning.

The arguments that speak in favour of the first of these assumptions are provided by the analysis of a maximally congruent Polish translation of (1):

1e. Człowiek może zdobyć wszystko, co jest niezbędne do życia, bez ciężkiej pracy.

With correct punctuation (i.e., with two commas cutting off the relative clause) (1e) involves no ambiguity. It seems that the 'categorically demanding rule' ("przepis bezwzględnie nakazujący" in Jodłowski's terms, cf. Przyłubscy 1973 : 22) that requires both the 'opening' (otwierający) and the 'closing' (zamykający) commas is gradually acquiring the status of a normative prescription, in view of what becomes the common practice of native speakers of Polish (cf. Przyłubscy 1973 : 46); out of the group of 25 students on whom I tested this tendency, only 4 used the 'closing' comma. Therefore, one should rather expect

1f. Człowiek może zdobyć wszystko, co jest niezbędne do życia bez ciężkiej pracy.

An interpretation of the modifying clause in (1f) as having a sentential antecedent would be, for semantic reasons, as unlikely as the analogous interpretation of the English counterpart (1a). Nonrestrictive modification is also ruled out by semantic considerations, whose nature seems universal, at least in respect of the two languages under consideration (cf. the argument on p. 320 above). Thus, (1e) reflects the intended meaning of (1), and is both correct and nonambiguous.

Unlike in English, in written Polish sentences with embedded relative clauses are systematically ambiguous (in all cases in which their semantic contents allows for the alternative possibility of both restrictive and nonrestrictive modification), cf., e.g.:

8. Wiem przecież, że rondo to nie najlepsze rozwiązanie, szczególnie na skrzyżowaniach, gdzie rozłożenie ruchu pojazdów nie jest równomierne z poszczególnych kierunków. (from a daily newspaper),

cf.

8a. ...especially at the intersections $\left\{\begin{array}{l}\text{, where the distribution of traffic...}\\ \text{where the distribution of traffic...}\end{array}\right\}$

The ambiguity can be resolved only by supplying additional syntactic and/or semantic signals, e.g.:

8b. ...szczególnie na *tych* skrzyżowaniach, gdzie rozłożenie ruchu...

This type of ambiguity may partially account for the difficulties that Polish linguists encounter while trying to establish formal criteria of differentiation between what is called (after Klemensiewicz) 'zdanie przydawkowe' (attributive clause) and 'zdanie rozwijające' (developing clause)[6]. Moreover, restriction of investigation to written texts only, conditioned probably by the rare occurrence of the 'developing' type in spoken language, results in the negligence of the fact that, in spoken Polish, the rules of tonality require that pauses set off nonrestrictive clauses, just as it is the case with English (for discussion, see e.g. Marek 1975).

Consequently, the rules governing the use of commas in such — and similar — cases are generally considered as a matter of pure convention (cf., e.g. Saloni 1971: 111 ...'czysto konwencjonalne są na przykład zasady użycia przecinka'...), as well as for the developing of the techniques of teaching punctuation to Polish children (cf. e.g. Cofalik et al. 1973: 245 ff.).

The emphasis on purely conventional character of punctuation in Polish seems to facilitate negative transfer at the early stages of learning English, which is proved by numerous instances of students' written performance, cf., e.g.:

9. *The fact, that the life of ancient man was less safe...
10. *The general result was that he had to do himself anything he wanted.
11. *His life was less comfortable, than nowadays.
12. *I found the stories and poems, we used to read at school not very interesting.

Doubtlessly, it is the systematic correction of such errors that leads towards overgeneralization, which becomes clearly visible already in those compositions which are written by first year students towards the end of the first year of academic study (cf. the high percentage of omitted commas, Table 1). Admitting no restrictions to the newly formulated 'no comma' rule results in frequent occurrence of sentences like

13. *Although Henry was clever his life was a failure.
14. *Because ancient man had no machines he did everything with his own hands.

In numerous cases faulty punctuation (or rather lack of punctuation) leads to difficulty of semantic interpretation:

15. *In modern times men have many advantages as machines which are mastered by men work for their comfort.

or to distortion of originally intended meaning (i.e., to 'extralinguistic ambiguity'):

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[6] For a discussion, see e.g. Tabakowska (1966).

16. ? Our notes should have logical structure which is not easy to achieve.

with the meaning actually conveyed, i.e.,

16a. Our notes should have logical structure that is not easy to achieve.

different from that actually intended:

16b. Our notes should have structure, which is not easy to achieve., cf.

16c. Notatki powinny mieć logiczną konstrukcję, $\left\{\begin{array}{c}\text{co}\\ \text{którą}\end{array}\right\}$ niełatwo osiągnąć[7].

A diligent Polish pupil, who learned both Polish and English in a Polish secondary school, may well develop the conviction that there exists a convention in Polish that requires cutting off relative clauses by means of commas, and another one in English that strictly forbids it. In respect of English, the problem is first introduced in Grade II (units 16 and 17), where the intonation of restrictive relative clauses is described and illustrated with examples; hypotheses concerning discrepancies in punctuation between Polish and English can be formed by those attentive pupils who might have carefully analyzed the English examples and their Polish counterparts. The rules of the use of comma in written English are discussed only in Grade IV (unit 8), but with no reference to intonation. Nonrestrictive modification, formally realized as relative clauses, is mentioned to be "another type of attributive clause, very rare in speech, but found in written language" (Smólska, Zawadzka 1973, part IV: 132). It is illustrated by several examples of such clauses, a short explanation of their semantic function and the rule that requires the use of the (pair of) commas. With the very restricted use of written English (both in the sense of interpretation of written texts and independent writing) in the textbook (which is in accordance with the requirements of the teaching programme), it cannot be justifiably expected that the rule will actually become a part of pupils' competence. That it does not, is clearly proved by first year students' written performance: the students do not use the commas even when they consciously aim at nonrestrictive modification. Moreover, many are unaware of the fact that the presence or absence of commas distinguishes between the two types of modification.

(16) and (16b) were given to a group of 19 first year students, whom I asked to analyze the sentences and then choose one of the three suggested opinions. The results are given below:

Table 3

There is no difference in meaning	11
There is a difference in meaning	6
I don't know	2

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[7] Syntactic ambiguity of (16b), shown overtly in (16c), results from the possibility of double reference of the nonrestrictive relative clause, i.e., to the second NP of the

The same students easily differentiated between an analogous pair of sentences which were read to them; it is plausible that the discrimination was facilitated by the analogous (in this respect) tonality of Polish.

Strangely enough, similar conclusions follow from the analysis of the second of the two errors exemplified in (1).

The teaching of the position of the Adverbial Prepositional Phrase inside a sentence is traditionally done according to the rule which states that "end position (i.e. after a verb and complement/object if any) is the most frequent" (Quirk et al. 1972: 334). Except for the adverbs of frequency, the elastic positioning of which is the subject of numerous exercises in numerous textbooks, the problem of adverbial modification is hardly discussed. The rough-and-ready rule advises the learners to position adverbials 'at the end of a sentence,' in accordance with the rule for manner, place and time adverbs. Adherence to this rule, when combined with the tendency to generate syntactically complex structures, results in the production of sentences like (5) and (7) above. Unless the sentence includes some additional semantic signals, the prepositional phrase is in such cases taken to refer to a verb other than the one intended by the writer. A maximally congruent translation of (5) shows that in Polish analogous misinterpretation is prevented only by rigorous application of the normative rule of the 'closing' comma:

5b. Współczesny człowiek korzysta z licznych udogodnień, których jego przodkowie byli pozbawieni, dzięki stosowaniu maszyn.

cf.:

5c. Współczesny człowiek korzysta z licznych udogodnień, których jego przodkowie byli pozbawieni dzięki stosowaniu maszyn.

In case of a reduced clause, however, the distortion of the intended meaning does occur:

7b. Ludzie znajdują osobliwą satysfakcję w tworzeniu czegoś pięknego w każdym szczególe.

cf.

7c. ? Ludzie znajdują osobliwą satysfakcję w tworzeniu czegoś pięknego, w każdym szczególe.

In the Polish counterparts of both (5) and (7), however, the preferred word order would be, respectively,

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main clause or to the whole main clause. In this case, however, this does not lead to significant discrepancies in semantic interpretation.

5d. Współczesny człowiek korzysta (,) dzięki stosowaniu maszyn (,) z licznych udogodnień, których jego przodkowie byli pozbawieni[8].

or

5e. Współczesny człowiek (,) dzięki stosowaniu maszyn (,) korzysta...

and

7d. Ludzie znajdują osobliwą satysfakcję w tworzeniu w każdym szczególe czegoś, co jest piękne.[9]

and also

1g. Człowiek może (,) bez ciężkiej pracy (,) zdobyć wszystko co jest niezbędne do życia.

or

1h. Człowiek może zdobyć (,) bez ciężkiej pracy (,) wszystko, co jest...

and finally

1i. Człowiek (,) bez ciężkiej pracy (,) może zdobyć wszystko, co jest...

In all the three sentences, placing the prepositional phrase in sentence initial position would be felt as an instance of marked theme (for discussion, see Quirk et al. 1972: 945 ff.). Thus (5c), (7c), (1g), (1h) and (1i) are shown to conform to the respective rule for English, which states that — although for adverbial prepositional phrase the medial (or 'parenthetical') position is the least usual — it is nevertheless used "where factors such as focus and the complexity of the sentence make the other positions undesirable or impossible" (Quirk et al. 1972: 335). In such cases, most acceptable medial positions are those between the auxiliary and the main verb (1g), between the verb and complement or object (5c, 7c, 1h) or after the subject (5d, 1i). In the case of (1), the first of these was proposed by the native informant (cf. 1b), while the remaining two, i.e., respectively,

1k. People can get, without hard work,...

and

1m. People, without hard work,...

were considered as acceptable alternatives. The initial position was ruled out, as an implication of marked theme. It seems that none of these alternative positions was used by the authors of (1), (5) and (7) because of their 'dogmatic' attitude to the normative rule concerning the end position of adverbials. To test this hypothesis, I asked a group of 20 fourth year students to translate (1g) into English. The following positionings of the adverbial phrase were chosen:

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[8] Commenting upon the optional use of commas in (5b)–(1i) would unduly prolong the discussion. Therefore, I decided to confine myself to mere indication of such an option.

[9] For rhythmical reasons, non-reduced clause is preferred.

Table 4

End position	7
Middle position (analogous to 1g)[10]	6
Initial position (i.e., marked theme)[10]	7
Total:	20

Thus 35% students use the 'standard' end position, even though in 3 cases the writers tried to prevent the misreference by setting the adverbial phrase off by means of a comma. Although the positioning of the phrase in (1g) was a temptation to produce a congruous translation, another 35% tried to convey the intended meaning by choosing the only normatively attested alternative concerning the positioning of the adverbial, i.e., the initial, even though the semantic import of (1g) clearly does not call for the marked theme.

Samples of students' written performance, as well as the results of tests (however limited and unsophisticated) seem to justify the assumption that both types of errors discussed in this paper (i.e., the omission of commas setting off nonrestrictive relative clauses and misreference of adverbial modifiers in syntactically complex sentences) might result from the excess of normative teaching.

In both, traditional teaching techniques follow the conclusions, concerning error prediction, which might result from contrastive analysis, however informal and impressionistic: due to interference, Polish learners *will* place commas in front of all relative pronouns, and they *will* tend to place adverbial prepositional phrases in any of the middle sentence positions, thus showing a tendency to use word order that in English often becomes definitely marked. Fighting against these predilections might indeed prevent the occurrence of errors at early stages of learning. With advanced students, however, it might become responsible for the "surprising tendency to dogmatism about *correct* and *incorrect* forms" (from the report on the written performance in English of a group of top fourth year students, members of a language course in Britain), which might in turn result in errors of overgeneralization (cf. inadequate punctuation) or lack of clarity (cf. ambiguous reference of adverbials).

The discussion presented in this paper seems to prove once again that contrastive analysis and error analysis should complement each other: while contrastive analysis can "only point toward a potential learning problem or difficulty, on the other hand, error analysis can tell us (...) the size of the problem" (Banathy, Madarasz 1969: 92), as well as provide insights concerning remedial procedures. Errors dicussed in this paper show clearly that "simple provision of the correct form may not always be the only, or indeed the most effective, form of correction" (Corder 1967: 168). For instance, the contrast between restrictive and nonrestrictive modification is dealt with in most textbooks (cf. e.g. Allen 1959: section 46; Hornby 1961: § 94; Kingdon 1958: 205; Smólska, Zawadzka 1973: part IV, unit 8). But the effectiveness of instruction suffers from a too strict separation between spoken and written language.

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[10] With or without the separating commas; cf. note 8.

Even though nonrestrictive relative clauses are not frequent in spoken language — either English or Polish — it is generally acknowledged that the use of punctuation is closely related to the interpretation of a written text. On the other hand, intonation is a crucial factor responsible for the occurrence of punctuation errors — a fact that has been often mentioned in theoretical and practical works (cf. e.g. Saloni 1971 : 112).

Much more research will be needed before it can be stated "what specific items of grammatical knowledge hold the greatest promise for improving composition skill" and "what degree of mastery of this knowledge is required before we may reasonably expect transfer to writing skill"[11]. But whenever distortion of intended meaning in written performance is caused by trasfer from spoken language, one cannot expect effective instruction to be carried out without ample reference to the spoken medium. The Polish learner should be made aware that modifying relative clauses, which in written Polish are systematically ambiguous in respect of their restrictive or nonrestrictive character, are in fact distinguished by differing patterns of intonation. This could facilitate the understanding of the analogous function of these two types of modification in the two languages. On the other hand, practising oral interpretation of written texts according to their punctuation can effectively break up the false conviction about purely conventional character of the rules of comma usage.

Similarly, teaching word order to advanced learners should go beyond the level of simple sentences and become more closely connected with the problem of semantic function of sentence stress and intonation.

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COLLECTED EXERCISES FOR INTERMEDIATE AND ADVANCED POLISH LEARNERS OF ENGLISH

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INTRODUCTION

The following exercises were assembled on the basis of four years' teaching experience in grammar and written English courses and error collection at the Institute of English, Adam Mickiewicz University, Poznań and close association over that period with the Polish-English Contrastive Studies Project and especially with the workshop sessions at the Kazimierz and Ustronie conferences in which pedagogical applications were fully discussed. The writer has himself delivered two papers at Karpacz and Ustronie respectively and those exercises dealing with future reference and with past tenses are directly connected with them. It should be stressed, however, that the writer's views of the pedagogical application of theoretical contrastive studies does not permit of what might be called the "parasitic" view. This view would imply that the theoretical comparisons of two languages naturally and logically precede pedagogical contrastive work. A comparison of two languages can be undertaken in many ways and for many reasons. If the aim is primarily pedagogical it follows that certain aspects of the language will be highlighted, certain aspects ignored and furthermore that the formalisation of insights will be devised to facilitate the construction of teaching materials and not to develop a particular linguistic theory. On the other hand, it must be said that pedagogical contrastive studies must take full cognizance of more technical analyses and the insights they offer despite the dissimilarity in the basic aims. That is why it is convenient and right that a contrastive studies project should embrace analyses undertaken with dissimilar aims, so that cross-fertilization of some sort may occur. But it would be wrong to imagine that for every theoretical analysis a pedagogical application should automatically be produced. Pedagogical work has to start from the other end, from the needs of learners and from the psychological and sociological factors that affect the learning situation.

As will be observed from a brief glance at the exercises, the learner is required to make a considerable amount of conscious effort in completing them. They are in sense drills requiring quick unthinking responses and for the most part they ask the learner to provide linguistic material of his own rather than merely juggling with what is provided. For immature learners the exercises would obviously have to be adapted. The majority of them are in fact being used by students at the institute and the intellectual and imaginative contribution that the individual has to make to the exercises have so far proved to be, on the face of it, highly motivating. On the one hand, the student is controlled by fairly detailed instructions and the large amount of given material including contextual information of an infrasentential (textual) kind. On the other hand, he is unable to run through the tasks automatically since he has to provide something himself. This is particularly true of the sequence sentence exercises and the sentence blank fillers. In other cases there are two separate and qualitatively different tasks to perform (see 13, for example). This sets up two different "poles of attention" requiring the learner switch consequently from one task to another. Such task polarity in exercises should prevent monotony apart from the resultant simulation of language behaviour which is essentially multipolar although in a more marked and uncontrollable manner.

In exercises 12 and 14 specific reference is made to the mother tongue, Polish. This runs counter to direct and audio-lingual methodology in its more purist form but in agreement with cognitive approaches which see the native language as information already in the learner's cognitive structure to be exploited rather than simply avoided. It is claimed that the learner constantly resorts to his mother tongue (consciously and subconsciously) despite efforts to prevent him and that this should be controlled by accepting and using it. For young learners this may not be true but for the kind of learner envisaged here it does seem to work and be appreciated.

The exercises here are not graded and in fact many can be used at both intermediate and advanced levels, the only difference being in the quality of the responses expected from the learner. Exercise 15 on noun premodifier word order actually precedes a simpler exercise on the same problem which was prompted by helpful criticism on the part of Roland Sussex who gave an insightful transformational analysis of the problem at the 1974 Kazimierz conference.

1. *COMMON ERRORS.*

INSTRUCTIONS: Find the error in each sentence and write out the correct version. Write another sentence of your own to illustrate the correction.

1. *I will give him the due to you money.
2. *Everyone was sorry that the admired by thousands actress had died.
3. *John loved passionately Jane.
4. *Only in love he was able to find happiness.
5. *The beautiful scenery reminds of the Baltic in springtime.
6. *He said me that it was O.K. and I told that I agreed.
7. *Questions in passive are difficult.
8. *Words containing short vowel are not always identical as far as vowel length is concerned.
9. *Sunday is day of rest for many people but not for everyone.
10. *Cigarettes are said to affect seriously the health.
11. *Give me a few advices on this matter, will you?
12. *It was fun to ski in such a lovely weather.
13. *What a fantastic day it is, told Mary.
14. *The old woman was telling my wife some gossips about our neighbour.
15. *I have a request to you.
16. *He has a strange desire of hard work.
17. *Mentality of the English is quite incomprehensible to me.
18. *Most of Americans I have met always ask the same question.
19. *Here are some informations about the times of trains to Warsaw.
20. *Put the verbs into past continuous.
21. *He was best pupil in the school according to the headmaster.
22. *The buses have stopped running. It means we will never get home in time!
23. *But most important is to interest the students.
24. *What does it mean, "kawiarnia"?
25. *What does it mean, "like a bull in a china shop"?
26. *This job involves certain amount of danger.
27. *I wanted to work but it was a terrible quarrel at home between my sisters.
28. *Some people seem to be fascinated by the historical grammar.
29. *Learning English it is a difficult task.
30. *He gave me a book on the Polish literature.
31. *Do majority of Poles think that Scotland is part of England?
32. *This is so-called "Oxford" accent.
33. *Walter Scott had great influence on European literature.
34. *I agree to John when he says that romanticism is dead.
35. *Is there the possibility to play badminton here?

36. *Could you tell me where is the lecture hall, please?
37. *Tell him he must to come immediately!
38. *Could you give me description of the missing person?
39. *They had never seen such a weather in all their lives.
40. *He was examining me for a long time and then he told me to leave the room.

2. *COULD HAVE and WOULD HAVE.*

2a. *INSTRUCTIONS*: Supply a sentence to follow each of the following using either *would have* or *could have*.

1. I don't know what has happened to George. ....
2. I don't believe that Tomek has decided to stay at home this evening. ...
3. If only I had known that it would rain. ....
4. It is a pity that you didn't tell me that your car was so small. ....
5. Since the front door has not been opened, the thief clearly got in elsewhere. ....
6. I can guess John's reaction at the news of Sheila's wedding. It is a pity that I wasn't there to see his face when he heard about it. ....
7. That driver was very lucky. ....
8. Imagine that you were the first man to cross the Atlantic. ....
9. I admit that I have been rather slow about writing to you. ....
10. I am furious about the examination results! ....

2b. *INSTRUCTIONS*: Supply a sentence to come *before* the following ones. It is not necessary to use *could have* and *would have* in your sentences. However, you may if you want to.

1. .... You could have let me know much earlier!
2. .... Surely he would have telephoned by now.
3. .... I could have sworn he was younger.
4. .... He would have recognised me at once without any difficulty.
5. .... Personally, I would have gone round to them and complained.
6. .... He could have easily been killed.
7. .... He would have been killed.
8. .... Could you have done any better in her position?
9. .... On the other hand, it could have been a complete coincidence.
10. .... Would you really have appreciated it?

2c. *INSTRUCTIONS*: Each of the following blanks represents one single sentence. Fill the blanks with sentences of your own choice using *could have* or *would have*.

When I learnt that my best friend had almost died I was shocked and filled with shame. .... I had left him with only the minimum amount of food, thinking that I would be able to find help quickly. .... However, I had to take enough to keep me strong and able to reach the nearest village. .... Then, both of us would have died on the mountain. It had been a difficult decision to make and I had clearly been wrong to take five tins with me, leaving him only seven. .... That would have been a better division of food supplies as it turned out. Another thing was that the rescuers were rather slow in organising a rescue party. .... Then the seven tins would have been enough. .... However, all's well that ends well. Both of us were saved.

3. *FREE CHOICE SEQUENCE SENTENCES.*

INSTRUCTIONS: Find one sentence (of your own choice) to go in front of the following ones. Each pair of sentences should form a small story with nothing important left unexplained. Note the examples below:

Jim had a large black cat. His cousin had a white one. (GOOD EXAMPLE)
**He had a green one.* His cousin had a white one. (BAD EXAMPLE) Here, a correct answer should answer the questions: *whose* cousin, and a white *what?*

1. .... The milkman then gave me some more.
2. .... However, I had simply forgotten it.
3. .... I was disappointed to see that there were none left.
4. .... One of them was the neighbour's daughter.
5. .... I found I could not eat any more.
6. .... This was the first one that I had seen since my arrival in Cairo.
7. .... Later it turned a funny shade of blue.
8. .... Most of them had disappeared and those that were left were in ruins.
9. .... He took out his wallet and showed them one.
10. .... It was the only thing I could do in the circumstances.
11. .... Then, to make matters worse, it began to rain.
12. .... When I saw this I was frankly shocked.
13. .... This struck me as quite ridiculous.
14. .... It was actually snowing and showed no sign of stopping.
15. .... Then, a little later, I began to see the funny side of it.
16. .... I replied that I had been waiting only five minutes for it.
17. .... I fell to the ground unconscious.
18. .... She did as I asked.
19. .... This news seemed almost incredible and yet it was true.
20. .... My heart was pounding violently and I lost control of my voice.
21. .... I shouted at him to stop but he paid no attention.

4. *CONDITIONAL SEQUENCE CLAUSES.*

INSTRUCTIONS: Complete the following sentences with appropriate clauses:

1. What would you do if ...
2. Ken would certainly have telephoned if ...
3. If ...you will find both pictures on Dad's pillow.
4. If ...you might have caught a glimpse of the President as he passed by.
5. Had I realised that Mary was having an affair with the doctor ..
6. If ...do not on any account let him see the photo.
7. You will not be able to finish painting today ..
8. I am sure that Mary will be alright in Zakopane as long as ..
9. The party is sure to be a great success providing that ..
10. I will not tell Waldek about what you did on condition that ..
11. If .. I would be able to understand what they are talking about.
12. Provided everything goes according to plan..
13. If only I could swim ..
14. The murderer would certainly have escaped ..
15. I could not tell you the secret even if ..
16. It would be a splendid opportunity to build the house if only ..
17. The little girl would have been killed instantaneously if ..
18. I might never have met him if ..
19. It might be a good idea if ..
20. I will keep my part of the bargain provided ..
21. If you do not switch off that vacuum cleaner at once ..
22. ...I would have been able to help you but now it is too late.
23. ...had he been there to catch me.
24. The lion leapt at the trainer and would have torn him to pieces if ..
25. I would be on much better terms with my landlady if ..

5. *FREE CHOICE SENTENCE BLANK FILLERS.*

INSTRUCTIONS: Each of the following blanks represents one single sentence. Fill in the blanks with sentences of your own choice, one sentence per blank. The sentence must fit the preceding and following sentence and the text as a whole.

Mr Archibald Jones was an extremely fat man. ... Its name was Sam. .... So the dog and its master looked rather similar. .... On weekdays they only went down to the end of the road and back. .... So Sam was always delighted when weekends came around. .... One Sunday, they were on their usual walk when three boys ran out from behind a wall and shouted: "....!" This made both the master and his dog extremely angry. .... But unfortunately the boys were too quick for them..... From that day on, they made the habit of teasing the comic little man and his equally comic companion. .... However, Mr Jones decided that he and Sam had better pay more attention to their diet as well as increase the length of their weekday walks. .... The boys, however, did not notice the change in their appearance. One Sunday they ran out as usual and shouted their favourite insults. .... They ran away laughing, certain that he would not catch them. .... One of them suddenly felt his teeth fasten firmly no to his trousers. .... The others turned round in surprise and in the meantime Mr Jones ran up waving his walking stick in the air. .... Finally the boys escaped ..... Sam stood watching them, a large piece of grey cloth in his mouth through which he was barking furiously. .... Revenge is sweet. The boys never tried their trick again.

6. *SENTENCE BLANK FILLERS WITH MODAL+HAVE.*

INSTRUCTIONS: Complete the following texts with a sentence for each blank using the pattern supplied in parentheses.

6a. What a fool I am! All my money has gone for the simple reason that I have lost my wallet. If only my pocket had not been torn! .. (SHOULD HAVE) .. She always mends my pockets. In fact I asked her to do it today. "Why did you leave it till now", she said, ".. (SHOULD HAVE) .." I told her that I had not realised how large the hole actually was. ".. (COULD HAVE) ..", she told me reproachfully. I agreed that I had not been as observant as I should have been. .. (MAY HAVE) .. I have had a lot of work to do recently.

6b. I showed the painter the room that I had made such a mess of. He smiled condescendingly as he saw my amateurish attempts. ".. (SHOULD HAVE) .." I agreed but added that I had thought that it would be an easy task. .. (COULD HAVE).. In that way less time would have been lost and the room would now be ready for the guests. I asked him why the colour had come out so oddly. .. (MIGHT HAVE) .. I replied that I had followed the mixing instructions on the tin but he said that I probably had forgotten to stir the paint for long enough.

6c. The inspector did not think that the murderer had known his victim. .. (WOULD HAVE) .. The broken window proved that. .. (MUST HAVE) .. His victim probably did not know what hit him or who. The murderer probably escaped through the same window he entered by. .. (MUST HAVE) .. The dead man's wallet was untouched. In fact it was not clear what the motive for the crime actually was. .. (MAY HAVE) .. The dead man had many enemies. He was well known to the police as a blackmailer although they had never found strong enough evidence to convict him. .. (COULD HAVE) .. The police now had to find out who he had blackmailed.

7. *SENTENCE BLANK FILLERS*: *MAY HAVE* and *MUST HAVE*.

INSTRUCTIONS: Fill in each blank with one single sentence containing either ***may have*** or ***must have*** (indicating possibility or certainty).

7a. I have no idea what has happened to our teacher. .... If she has, we will all be very sorry. We would not like her to spend the rest of the term in hospital. But wait a moment — here she is! ....

7b. I cannot find the book you lent me. .... I thought you would not mind. He treats books very well. You have nothing to worry about. .... It was at least a month ago that I lent him it.

7c. Look at the terrible state this flat is in. .... Otherwise she would surely have tidied it up for us. I wonder where she is. The door was unlocked and the radio is still on. .... She is normally very careful. .... And then, maybe she rushed to the neighbours' to get some cakes or something. We really should have warned her that we were coming.

7d. Mr Browning came into the office today with mud all over his coat. ... He should have taken my advice and bought some better shoes for walking on snow. .... He is so tight-fisted, he hates spending anything on clothes, even his own!

8. *SEMANTIC SUBSTITUTIONS — MAY* and *MUST* (***Past, Present and Future reference***).

INSTRUCTIONS: Read through the following text and wherever you can substitute a verbal pattern containing ***may*** or ***must*** for one in the text (without changing the meaning) do so. Examples:

> ***It is possible that he has not yet come*** becomes ***he may not have come yet.***
> ***He is most probably in bed*** becomes ***he must be in bed.***
> ***It is highly likely that the bus broke down in Brighton*** becomes ***The bus must have broken down in Brighton*** (Note use of ***have***)

I have just seen Ken Russell's film "The Devils". It was terrible. Probably most of the audience thought the same as I did. They looked pretty sick when the lights came on at the end. Mind you, it was possibly the stuffiness in the cinema that caused this. The ventilation inside was very bad. It is highly likely that it broke down before the film started. Tony suggested that they possibly did this deliberately but I do not think he was serious. I thought generally that there was too much violence in the film. It is possible that there was some justifiable reason for this but I cannot imagine what this might have been. I am most probably a complete ignoramus when it comes to appreciating good films. At least Tony thinks so. I certainly do not like the trend films have been taking recently. Possibly I am simply getting old, and out-of-date! However, I think everyone is entitled to his opinions whatever age he is. I have no intention of ever seeing another Ken Russell film. Tony likes him, I know. He most probably has a stronger stomach than I have. He has seen all Ken Russell's films to date.

9. *COMPOSITION EXERCISE — MAY and MUST (Past, Present and Future reference).*

INSTRUCTIONS: Imagine that you have had an argument with your sister about a book you have read or a television play you have seen. You both think that you can remember the story better than the other. Use as many constructions with *may* and *must* as you can (Example: *Mr X must have loved Julia because he never married again*). Give a report of the argument in the first person or, alternatively, write it out as a dramatic dialogue.

10. *COMPOSITION EXERCISE — TENSE, PRONOUN and ARTICLE USAGE.* (For revision and testing).

INSTRUCTIONS: Below are a series of short texts written in something like the kind of English used in telegrams or newspaper headlines. Write out what the original underlying text is. Example: *I come tomorrow to see aunt* becomes *I am coming tomorrow to see my aunt*, or another similar sentence with an appropriate verbal form of future reference. Put in correct tense forms, articles, pronouns and other "missing" items where necessary. Punctuate correctly.

10a. DEAR AUNT. I MEAN WRITE FOR AGES BUT VERY BUSY RECENTLY. MOTHER IN HOSPITAL BUT NOTHING SERIOUS. SHE BURNT HERSELF SLIGHTLY IN KITCHEN. WILL BE HOME TOMORROW. JIM PASSED EXAMS. PARTY NEXT TUESDAY. LOVE FROM ALL OF US. SANDY.

10b. I ONCE HAVE CAT. CAT CALLED WHISKERS. EVERY EVENING AT 10.30 CAT GO MAD. CAT JUMP. CAT RUN TO AND FRO. HAVE NO IDEA WHY. ASK SANDY. SANDY SAY ALL CATS LIKE THAT. I SAY IF I KNOW THAT EARLIER I NOT BUY WHISKERS IN THE FIRST PLACE. I BUY DOG. NOW TOO LATE. I NOT HAVE MONEY FOR DOG AND WIFE NOT ALLOW SELL WHISKERS.

10c. FAT MAN WALK DOWN STREET ONE DAY. FAT MAN CROSS ROAD. FAT MAN SEE NO CAR. CAR COME SLOWLY TOWARDS FAT MAN. CAR HIT MAN. FAT MAN PERFECTLY ALRIGHT EXCEPT MINOR BRUISING. CAR HAVE DENT. DRIVER ANGRY WHEN

DRIVER SEE THIS. FAT MAN LAUGH. BUY STRONGER CAR SAY FAT MAN UNSYMPATHETICALLY.

10d. ANNA FIRST YEAR STUDENT. ANNA ALWAYS INTERESTED IN ENGLISH LITERATURE ESPECIALLY MODERN BRITISH DRAMA. ANNA ALREADY STUDIED PINTER AT SCHOOL. BUT ANNA GOT SHOCK. SHE HAD TO DO DESCRIPTIVE GRAMMAR. MORE LIKE SCIENCE THAN ARTS SUBJECT. SHE COMPLAINED SPEECH ORGANS FOR DOCTORS NOT FOR PEOPLE LIKE ME. BESIDES PICTURES QUITE REVOLTING.

10e. I JUST COME FROM TERRIBLE LECTURE. WORST I EVER HEARD. NOT ONLY LECTURER BORING BUT SEEMED HALF ASLEEP MOST OF THE TIME. NO POINT HEARING SUCH NONSENSE. RATHER DRINK COFFEE.

10f. MY TRAM LATE TODAY. ALSO GOT UP LATE. HATE THIS EARLY CLASS ON TUESDAYS. GOT TO INSTITUTE FIVE MINUTES BEFORE CLASS START. I THINK I MANAGE TO GET THERE ON TIME. BUT LIFT NOT WORK. I LATE AFTER ALL.

10g. IF I KING I STOP ALL EARLY MORNING CLASSES. I GIVE STUDENTS SAME SALARY AS LECTURERS AND REMOVE ALL BORING AND INEFFICIENT TEACHERS. I ALSO ABOLISH EXAMINATIONS.

10h. DOCTOR ASK ME LIE DOWN. I LIE DOWN. DOCTOR ASK ME RAISE ARM. I RAISE ARM. DOCTOR ASK ME OPEN MOUTH AND SAY "AH". I DO AS DOCTOR SAY. DOCTOR TELL ME NOTHING SEEMS TO BE WRONG. I ANSWER I KNOW THAT. I ONLY COME MEND TELEPHONE. I THINK DOCTORS WORK TOO HARD SOMETIMES.

10i. IF YOU NOT STOP CREAK THAT CHAIR I BRING YOU INTO CONTACT WITH THIS DICTIONARY OF ADVANCED ENGLISH IN UNUSUAL BUT EFFECTIVE WAY.

11. *FREE CHOICE SENTENCE BLANK FILLERS.*

INSTRUCTIONS: (See Exercise 5)

11a. It was a typical winter morning. .... We had to have the lights on in the class room. .... Dr Kowalski was two or three minutes late. .... Suddenly Janusz said: "...." We all agreed to ask Kowalski when he came in. We chose Anna, the prettiest student, to make the suggestion to him. .... He looked pale and tired. .... He smiled and reflected a moment. .... He shook his head all the same and said: "...." We protested in vain. "If you really want to invite me out" he said, "you can do so after the class." ....

11b. I can see the burglar now. Do not move or make any sound or you will make him suspicious. .... Now he is crossing the road. .... It looks heavy. .... He has probably got a crowbar to force open a door or a window. .... It is no 47 as I thought! He has gone through the garden gate. .... He is taking something out now. .... He is using it to open a window on the ground floor. ..... He has now disappeared. .... If we do not do this quickly, he will escape.

11c. Tomorrow I am definitely going to stop smoking. .... When I wake up, I will feel like a cigarette as usual. .... When I have had my first cup of tea, I will feel like another. .... On the way to the university, I had better take a taxi instead of a tram. .... Besides, the expense of taking a taxi will help me to avoid the kiosk outside Collegium Novum where I usually buy a packet of "Carmens". .... Then, after the first class I will experience another moment of temptation. .... In this case I will have to refuse. .... Nothing will tempt me to break my promise. .... And even when I go to bed, I will put the light out without touching the packet I keep by my bedside. ....

11d. Have you heard the news? Tomek tried to give up smoking today. .... When we heard this we had to laugh. You know Tomek. .... After the first class Danuta offered him one. ..... Danuta tried to change his mind. .... For a short time it seemed as though he really had given up. ..... To be precise, it was before our second to last class. When we went into the classroom he looked embarrassed and wanted to sit alone. .... So he was forced to sit next to me. .... It reminded me strangely of tobacco!

11e. The packet was square-shaped. .... It sounded rather like an alarm clock. .... This second possibly frightened me more than I cared to admit. .... The more I looked at it the more dangerous it seemed. .... My heart beating faster, I put my ears close to the packet but still could not hear anything. The silence was awful. .... As I ran, I could hear my heart pounding like "the clock" that had just stopped. .... From this position, I listened for the inevitable explosion. ... I was still there when my uncle came home. When he came into the room he was holding something in his hand. ....

12. *SIMPLE NARRATION: PAST SIMPLE VERSUS PAST PROGRESSIVE.*

INSTRUCTIONS: The simplest kind of narrative is made up of actions or events one after the other in time (*I saw the man. He began to run. I ran after him.*) Here the verbs are in the Past Simple. They tell a story of the kind *X a potem Y a potem Z*. This will be called the NARRATIVE use. Another kind of use, here called the DESCRIPTIVE use, serves to describe activity in progress *at the same time as* one of the events of the story, i.e., when X happened, such and such an activity was going on. Let us take a concrete example: *He was examining the boy*. This descriptive use of the verb employing the Present Progressive tense, cannot work unless there is some narrative event on which it may depend, e.g., *I looked at the doctor*. (*He was examining the boy*). Note that the descriptive use is not really the same as the Polish Imperfective meaning. We may have to translate an Imperfective verb into the Past Simple because it is used narratively, e.g., *przez pierwsze trzy kilometry szedl a przez następne dwa biegl = for the first three kms he WALKED and for the next two he RAN*. No matter how long the walking or running seemed to last they are separate steps in the narrative (X a potem Y) and must go into the Past Simple. Do the following composition using the verbs supplied and treating them narratively or descriptively as indicated by the symbols (N) and (D). For each verb supply one sentence.

Example: (see 12a) *Jim opened the window. Then he sat down.*
A cushion fell off the chair.

12a. open (N), sit (N), fall (N).
12b. wake (N), sing (D), prepare (D)
12c. kiss (N), faint (N), pour (N)
12d. watch (N), swim (D), play (D).
12e. see (N), hit (N) collapse (N), telephone (N), arrive (N), examine (N).
12f. open (N), shine (D), sing (D), catch sight of (N), run (D), look (D) laugh (N), frighten (N), disappear (N).

12g. *INSTRUCTIONS*: Fill in the following text with verbs of your own choice following the indications concerning (N) or (D):

I (N) into the bedroom. Little Danny (D) soundly. I (N) the door quietly so as not to disturb him. For three long hours I (N) for the doctor to come. There was a ring at the door just as the church clock (N) three thirty. I (N) down the stairs and let the doctor in. We went in to see Danny. The doctor (N) him very carefully and then (N) that Danny would have to go to hospital for a check-up. Danny (N) in hospital all morning the following day and in the afternoon a specialist (N) him for two hours. In the end they all declared he was as fit as a fiddle.

N. B. Note there are some verbs that *cannot* be used in the Past Progressive and so, when used descriptively, are in the Past Simple, e.g., *smell* in *The flowers in the window box smelt heavenly*! Check your grammar for these verbs.

12h. *INSTRUCTIONS*: Write your own short composition describing a dramatic incident, using both narrative and descriptive notions and marking the verbs with the appropriate symbols ((N) or (D)). Use short sentences on the whole.

13. *ARTICLE USAGE AND WORD ORDER (PLACEMENT OF ADVERBIALS).*

INSTRUCTIONS: In the following text put in the correct articles where necessary and place the adverbial (in parentheses) in a suitable position in the sentence. Example: *He hit dog* (cruelly) = *He hit the dog cruelly* or *he cruelly hit the dog* or *Cruelly, he hit the dog* but not **he hit cruelly the dog* (verb and direct object wrongly separated).

13a. They have just finished roundabout and new road system by Merkury hotel and you must see it (really). Visitors from Poznań fair will not fail to be impressed by subways under roundabout. They are attractively decorated and there are number of small shops there. Those guests at Merkury who have the luck to have their window facing town centre will have splendid view over roundabout to Collegium Minus and shopping centre. Bill Sawyer, a friend of mine, visits Poznań (occasionally). During the fair he does not see much of the town (normally). He has seen the cathedral once and the town hall twice. He has seen Kórnik castle several times (also). He has yet to see White Lady. Being a hard-headed businessman he has time for ghosts (seldom). Once, however, he saw a strange woman there (clearly). She was dressed in a long white dress that reached the ground. No one seemed to notice her. When Bill approached the "apparition", it seemed to disappear (cautiously). Bill later explained the event to himself as a result of consuming too many vodkas after the official closing of their fair pavillion (too quickly)

13b. *INSTRUCTIONS*: In the following text supply articles where. necessary (especially in the following pattern: ARTICLE + NOUN + *of* + NOUN) and insert adverbials of your own choice, one for each sentence. Example: *He hit dog* = *he hit the dog lightly/cruelly/violently/angrily*, etc. Underline your added adverbial.

Soft palate may be found in upper part of mouth if you look in mirror. It is flexible organ of speech which, for example, enables us to stop air passing through the nasal cavity. The soft palate (or velum) is used in variety of situations, e.g., while kissing our loved one by light of the silvery moon. Similarly, it is used when sucking iced coffee through a straw or when drawing cigarette smoke into the mouth prior to breathing it into the lungs. Most important uses of the velum in speech are 1) to produce the oral/nasal difference in sounds and 2) as passive articulator in velar sounds such as "k" and "g".

13c. *INSTRUCTIONS*: As for 13b.

John is kind of person who likes to go to his local pub and meet his friends for a drink after work. At 6 p.m. Bill Baxter, the landlord of the Three Mariners opens the door of public bar and welcomes first customers of the evening. Rest of the evening is spent drinking beer, playing darts and discussing state of the weather and how it might affect the current international cricket or football match. Results of matches seem more important than Common Market, terrible state of the economy or even wives of those drinking. John thinks that an evening at the pub is way of relaxing. He would rather spend an evening in company than stay at home watching television until midnight.

14. *NOUN MODIFICATION- TRANSLATION EXERCISES.*

INSTRUCTIONS: Remembering that constructions with prepositions or "particles" are not normally permitted in front of the noun (e.g. **the jumping UP puppies, *the due TO him money*, etc.) write out following sentences in correct English translating the Polish sections.

1. He found the ODDANE PRZEZ NIEGO PAPIEROSY on her desk.
2. JOHN lost the POŻYCZONE MU KSIĄŻKI on the way home.
3. The ZAPOCZĄTKOWANY PRZEZ NIEGO RUCH FILOZOFICZNY lasted for twenty years.
4. The UPRAGNIONE PRZEZ WILBERFORCE'A ZNIESIENIE NIEWOLNICTWA was finally achieved.
5. They met the WRACAJĄCY DO DOMU ŻEGLARZE outside the station.
6. The USTALONA PRZEZ JONES'A TRANSKRYPCJA proved very helpful.
7. The parents complained about the ZNIENAWIDZONY PRZEZ UCZNIÓW NAUCZYCIEL.
8. The WYŚMIEWANA PRZEZ WIELU TEORIA turned out to be the best one in the end.
9. The UWIELBIANA PRZEZ TYSIĄCE AKTORKA was no longer able to cope with normal everyday life.
10. The WYKONANY PRZEZ NIEGO KONCERT was the most enjoyable part of the concert.
11. His OPARTE NA MOCNYCH ZASADACH POSTĘPOWANIE enabled him to remain completely consistent.
12. The DOSTĘPNE MU INFORMACJE was not nearly sufficient.
13. The ŚWIECAMI OŚWIETLONA JADALNIA was packed with doctors and professors.
14. The CZEKAJĄCY NA KORYTARZU OJCOWIE were all smoking like chimneys.

15. He resented the **NIEZNANE MU ZWYCZAJE**.
16. The **MAJĄCA TROJE DZIECI KOBIETA** instinctively knew how poor Mary felt.
17. The **HAMUJĄCE ROZWÓJ CZYNNIKI** were minimal and presented no problem.
18. The **UGOTOWANY PRZEZ NIĄ OBIAD** was totally ruined by midnight.
19. The **CZUWAJĄCY NA MOSTKU RATOWNIK** raced towards the drowning man.
20. The **HAŁASUJĄCE POD PODŁOGĄ MYSZY** kept us awake all night.

15. *NOUN PREMODIFIER WORD ORDER — A FAIRY STORY.*

INSTRUCTIONS: The adjectives/in parentheses in the text below are not necessarily in the right order. Write out the story putting in the adjectives in the most normal order and supplying a suitable noun in the blank spaces (....).

Once upon a time there was a(n) (FAT-WISE-OLD) .... who had a daughter who was famed for her beauty. The royal family lived in a(n) (OLD-STONE-MAGNIFICENT) .... in the middle of a(n) (ENORMOUS-PINE-GREY) forest. One day the princess was sitting in one the (ELEGANT-TALL-GREY) towers dressed in a (WHITE-LOVELY-SILK) gown. Suddenly, through the (POINTED-THIN) .... she caught sight of a (SHORT-FAT) .... on a (WHITE-SMALL-UNHAPPY) horse approaching the castle gates. From nowhere a(n) (INNER-MYSTERIOUS) .... spoke to her: "This is your future husband". Startled she looked again at the newcomer. This was not the (TALL-ROMANTIC) prince of her dreams. He looked more like a(n) (OLD-VILLAGE) idiot! A moment later he was shown to the princess's room. He bowed low before her. "Why have you come? Who are you?" asked the princess in a nervous whisper. The .... did not reply but came closer, grasped her (TREMBLING-RIGHT) hand and kissed her (BEAUTIFUL-GOLD-SPARKLING) .... . Immediately there was a (DEAFENING-TERRIBLE) noise and a (BLUE-HUGE) .... of blue smoke appeared where the stranger had stood. When the smoke cleared, there stood before her a (HANDSOME-TALL-DARK) man in a (SILVER-MAGNIFICENT-MILITARY) uniform that glittered like a thousand stars. After a pause, the man cried out: "O Princess, my name is Prince Magnificento! I was on my way to beg for your hand in marriage when a (BLACK-WICKED) witch turned me into a village idiot. But a(n) (WISE-OLD) wizard whom I met a little later on told me I would be free of her curse if I kissed the ring of the most beautiful woman of the land!" Of course, it goes without saying that the prince and princess were soon married and had scores of children. So our story has the USUAL-HAPPY) ending. The (YOUNG-RADIANT) couple lived happily ever after and all their sons and daughters were (OBEDIENT-GOOD) children who always went quickly to their (COMFORTABLE-NICE) beds and never woke their parents up too early in the morning. Goodnight.

16. *SEMANTIC SUBSTITUTIONS — MAY and MUST in negative sentences.*

16a. *INSTRUCTIONS*: See Exercise 8.

Mike, this time I am going to let you drive the car. It is possible that you will not like to be the driver when you see the traffic today. But it is important not to get too tense. Don't panic. Possibly the traffic will not be so bad as you fear. A lot of people are at home watching the Poland-Scotland match. It is possible that people have not followed their usual weekend plan of taking the car out into the country. However, it is important that you do not relax too much. You will possibly not feel any strain for the first fifteen minutes. But after a bit, you are likely to begin to feel tired. It is important not to worry about this. This is quite normal for beginners. Nevertheless it is possible that you will not notice the fatigue to start with. This is very dangerous. It is easy to get overconfident if nothing disastrous happens. That is why I say that relaxing too much is dangerous. Possibly you are not the kind of person to become overconfident. But you never know. People can change character once they get behind a driving wheel. It is vital that you do not become a maniac when you see open road in front of you! You possibly do not realise this but your great aunt -Aunt Daisy- was called the Terror of Tankerton in her driving days. Everyone used to get out of her way when she came into sight. I was always terrified when I saw her coming into our farmyard in her old Austin 10. Possibly I was the bravest man in Tankerton but I can assure you that everyone else ran for cover in case she drove in their direction. So you see, it is important that you do not take offence when I put on my safety belt and cross myself. It is possible that you are not the best of drivers and you look remarkably like your great aunt when you look through the windscreen in that concentrated way of yours. Nevertheless you must learn to cope with Tankerton traffic some day so lets go.

16b. *INSTRUCTIONS*: Give some cooking directions to a friend using *must not* in the sense of "it is important not to .." and *may not* in the sense of "it is possible that .. (not) .."

17. *REFERRING TO THE PRESENT.*

INSTRUCTIONS: We talk about the present in various ways. One tense used for this purpose is the Present Simple. This tense, it should be noted, is much more common than the Present Progressive. When doing the following exercises, think about the meanings conveyed by the tense you use.

17a. *INSTRUCTIONS*: The following blanks should be filled with verbs that fit the context and are in the appropriate present tense.

1. Watch me carefully. I .... the duck in the oven. I .... the door. I .... the gas down low and then I .... on the potatoes.
2. Marinho .... the ball to Rivelino. Rivelino centres it but Lato is there. He .... the ball and dribbles it down the centre. He ..... Its a goal!
3. Normally I .... at this taxi stand for ages and ages. The taxis seldom .... out here at this time of the morning.
4. Jim used to work at the technical college down the road. Where .... he .... now?
5. John never .... out with skinny girls. He .... his women plump!
6. I .... what you want to say only I .... that your English is not yet good enough to express it clearly.
7. Mmmm! That soup .... wonderful. I .... soup and especially tomato soup.
8. .... you .... hear that noise? It must be the plumbers fitting the new pipe in the roof.
9. Poznań .... terrible from this position. .... you .... with me?
10. .... you .... better at night or can you concentrate better in the morning?

17b. *INSTRUCTIONS*: The Present Progressive is used to describe *temporary* states or events. Examples:

I am cooking my own meals until my mother comes back.
I'm reading a book about Chopin. You can have it when I've finished.
Imagine the situation of a nurse in a remote country district. The doctor is unable to pay his/her regular visit and the nurse deals with them instead. Write a report, as written by that nurse, describing the treatment she has given. Use as many present tenses (both kinds) as you can.

17c. *INSTRUCTIONS*: Write a letter, using the present tenses, complaining to a friend about two terrible young children you are in charge of at the moment. Use as many present tense examples as you can.

17d. *INSTRUCTIONS*: Describe a friend, an imaginary person or a member of the staff where you study using as many examples of the present tense as possible. Use *to be* as a main verb only twice. (For example: *He is an engineer*). Do not use *have* as a main verb.

18. *REFERRING TO THE FUTURE*: *SEQUENCE SENTENCES.*

18a. *INSTRUCTIONS*: In English there are two basic ways of looking at the future:

1) Emphasis on the future (*will*, *shall*)
2) Future as related to the present (plans, decisions, present cause)
The second type may express the programmed future: the event is already planned, arranged, decided upon. A common informal way of expressing this idea is by means of the Present Progressive. Add a sentence to each of the following, using this tense.

1. I have a little surprise for you two. ....
2. You do not have to take Jo in the car with you now. ....
3. Aunt Linda has just written. ....
4. Have you heard what we have planned for this evening? ....
5. I know what you have arranged. ....
6. Professor Johnson has just phoned from Salford. ....
7. I have at last decided about my summer holidays. ....
8. Dr Kowalski has changed his mind about our evening class. ....
9. Henry and Anna have come to some sort of agreement about the journey. ....
10. You do not have to worry about Marianne. ....

18b. *INSTRUCTIONS*: Note the meaning of the following symbols:
FUT-FUT (emphasis on the future: use *will*)
PRES-FUT (future arising from present or past circumstances: use *going to*)
PRES-FUT PROGR. formal (future arising from large scale plan e.g. official timetables: use Present Simple)
PRES-FUT PROGR. informal. (informal version of above; see 18a)
Add a sentence to each of the following containing a verb form as indicated by the symbols.

1. I often wonder about the future of the world. .. (FUT-FUT) ..
2. Look at those dark clouds! .. (PRES-FUT) ..
3. We must be at the station before noon. .. (PRES-FUL PROGR. formal) ..
4. Hurry up and get the flat looking neat and tidy. .. (PRES-FUT PROGR. informal) ..
5. Quick! Fetch a doctor! .. (PRES-FUT) ..
6. I am very worried about the results of Peter's exam which have not yet arrived. .. (FUT-FUT) ..
7. I often wonder about the future of the world. Look at the population statictics for example .. (PRES-FUT) ..
8. Ron is a terrible driver. .. (PRES-FUT) ..

9. I am sorry that you can't come today but how about tomorrow? .. (PRES-FUT PROGR. informal) ..
10. Watch out! .. (PRES-FUT) ..
11. Prepare yourself for a shock. .. (PRES-FUT PROGR. informal) ..
12. Darling, I have some wonderful news for you. .. (PRES-FUT) ..
13. Darling, I have some wonderful news for you. .. (PRES-FUT PROGR. informal) ..
14. Darling, I have some wonderful news for you. .. (PRES-FUT PROGR. formal) ..
15. Darling, I have some wonderful news for you. .. (FUT-FUT) ..
16. Mr Johnson in bed no.5 is looking rather pale. .. (PRES-FUT) ..
17. I have just been informed about the President's arrival. .. (PRES-FUT PROGR. formal) ..
18. I wonder if John will be there. .. (FUT-FUT) ..
19. Wait until after your last exam. .. (FUT-FUT) ..
20. You really should be more careful about your diet. .. (FUT-FUT) ..

18c. *INSTRUCTIONS*: Write a letter to a friend telling him/her about the September re-sit exams and your plans for preparing for them. Also mention the next semester and details of the timetable which you have just learnt. Use as many examples of referring to the future as possible and mark the appropriate symbol as in 18b after the examples.
Example: *Our Monday class starts at 10 a.m.* (*PRES FUT PROGR. formal*). Notice that FUT-FUT is typically used in conditional sentences. Since the letter is informal you will tend to use the informal version of the programmed future idea (and therefore the Present Progressive). Try, however to get at least one example of all types of future reference mentioned above.

18d. *INSTRUCTIONS*: *be to* provides another way of expressing the idea of programmed future (in the more formal sense). The abbreviated version (without *be*) is often used in newspaper headlines, e.g., *QUEEN TO LAUNCH NEW OIL TANKER*. i.e., *the Queen is to launch*. etc. Now write ten similar headlines with both singular and plural subject nouns.

19. *THIS, THAT and IT*.

INSTRUCTIONS: Check your grammar for the use of *this* and *that*. Notice that we may distance ourselves metaphorically from an event by using *that* instead of *this*. Emotions such as surprise, disgust and humour make us use *that* (Examples: *That is odd! What about that! I don't like that.*) *This* is often used, especially when talking about something you have just mentioned or are about to mention (Examples: *His idea was this: walk in backwards. Joan is ill. This worries me*). Note also that *that* is commonly used in past reference and *this* in the future (*Remember that man we saw? You will like this film we are going to see*). Now fill in the following blanks with *this, that* or *it*. Sometimes there are alternative solutions (as between *this* and *that*) according to the meaning you select.

1. I have just learned that Professor Fillmore will be lecturing here on Thursday. .... means that our normal literature seminar will not take place.
2. I have just completed my M. A. thesis in five weeks! What do you think of ....!
3. The computer programme using transformational grammar was far less successful than the one which used Hallidayan grammar as a model. .... was a surprise to many scholars.
4. The two countries could not come to an agreement. The President was very extremely distressed by .... fact.
5. What I really mean is ....: no one may finish before he has made two clean canastas.
6. Come here and look into the fishbowl for a moment. (Pause) Well now, what do you think of ....:
7. Do you remember .... man with a limp that we saw yesterday?
8. .... is a real scandal, the way people get away with shoplifting.
9. I saw a friend of yours this morning—you know, ... man with the Great Dane.
10. .... should amuse you if you know Jacky: she's just won £500 on the football pools.
11. JOHN: How about going to the cinema this evening.
    SAM: Hey, ... *is* a good idea!
12. He told it .... way: first George hit Tom and only then did Tom hit George.
13. I'm really annoyed with .... fountain pen. My old one was much better.
14. Jim never knew about the accident and .... is why he shouted at Ken for being late.
15. Do you mean to say Bill and Tim both left on the same day? .... was a coincidence!
16. The question is ....: should we remove the door to mend it or not?
17. Hullo George! George, ... is a friend of mine, Tim Sawyer.
18. I just remenber passing my driving test. I drove .... old Ford they used to have.
19. I'm so sorry I made a mistake. .... is my first time on duty.
20. .... is very odd. I am sure I left my car here.

20. *TALKING ABOUT THE PAST WITH REFERENCE TO THE PRESENT.*

INSTRUCTIONS: Check your grammar for uses of the Present Perfect. In each example below think of what *extra* information is conveyed by the Present Perfect in contrast with the English Past Simple and the Polish Preterite.

20a. *EXPLAINING THE MEANING.*

INSTRUCTIONS: In the following text you will have to complete the text by supplying verbs in the ***Present Perfect*** tense using any extra words which are given in the parentheses. Wherever the Past Simple is ALSO possible mark a number against your verb and below the text in a footnote explain the difference in meaning between the two tenses in that particular context. There are of course places where only one tense is possible and theresore no numbered footnote is necessary. The text below should be comfleted using the minimum of words possible so that the whole story reads densibly.

I found my friend standing like a statue next to a large gravestone. "What ....? You .... a ghost?" I said. Jim did not say anything. "I .. (never) .. look so pale! Are you O. K? I .... for you for hours and hours," I said. At last he replied. "For the last hour or so I .... here, waiting for you," he said slowly. "About ten minutes ago you — or at least I thought it was you — arrived. A tall figure came into the graveyard. I shouted to you—to him, that is, 'I'm over here, John! Why .... so long? I .... for ages and I am extremely cold.' The figure that I thought was you did not say anything but came over here to this grave."

Jim stopped speaking. He was trembling with fear. This surprised me. Jim .. (always) .. one of those people who do not scare easily. I said, "Surely you are not going to tell me that you .... a ghost?" Jim started to speak again apparently ignoring my question. "The stranger stayed by this grave and I came over too. Suddenly I realised that it wasn't you. The stranger looked round at precisely that point. But he seemed to be staring right through me! And then he faded and disappeared into thin air, I swear it! Nothing like that .... to me before. When you arrived I thought it was the stranger again. But I had already looked at the gravestone here. I think you .... it before!" Indeed I had. It was my father's!

20b. *INSTRUCTIONS*: Write twenty sentences stating what you have never done before. Example: *I have never played tennis.*

20c. *INSTRUCTIONS*: Write twenty sentences stating what you have always liked or hated doing.

20d. *INSTRUCTIONS*: Ask twenty questions based on your noticing the presence or absence of something in the present. Examples: *What have you done to your leg? What has happened to Jim?*

21. *NOUN PREMODIFIER WORD ORDER. – MAKE YOUR OWN SENTENCE.*

INSTRUCTIONS: Below are groups of two or three adjectives. For each group write a sentence using the adjectives to describe a noun in your sentence. The words given below are NOT NECESSARILY in the right order. Example: NICE/WOODEN/LITTLE=*My uncle had a nice little wooden box in which he kept his playing cards.*

CHARMING/SILVER, RED/BIG, PLUMP/SPANISH, INTERESTING/ /IRON, ENORMOUS/BROWN TIMID/FOUR-YEAR-OLD/LITTLE, YOUNG/GREEK, CRIMSON/PAPER, LEATHER/YELLOW, WOOLEN/ /DIRTY, CLEAN/COTTON, ANCIENT/RUINED/BRICK, REVOLTING/ /RED, STONE/LARGE, EXCITING/COLOUR, AMBER/POLISH, LINEN/ /IRISH/NEW, FRENCH/PLASTIC, BLACK/MAGNIFICENT, SILK/ /WHITE, OLD/BLUE/CHINA, IVORY, CHINESE

22. *THE REPHRASING AND LIMITATION OF GENERAL STATEMENTS.*

INSTRUCTIONS: In the following series of exercises, three symbols will be used: *GEN*, *LIM* and *REPHR*. GEN stands for a general statement, the sort of statement we may use to introduce a paragraph, or an essay (or indeed conclude one), e.g., *The cat is a solitary animal*. But general statements can cause misunderstandings sometimes. The reader may infer something not intended by the writer. For this reason we may add a clause or sentence *limiting* the general statement in some way. These limiting statements are symbolised by LIM. They are introduced by expressions such as *but*, *still*, *although*, *however*, *all the same*. Example: *The cat is a solitary animal but it has sometimes been known to form great attachments to people or other animals.* Here the reader is not allowed to infer that the cat is always solitary or totally solitary. A general statement may also be difficult to interpret in the context. In this case the writer supplies a *rephrasing* of the general statement in order to make clear what he means. Rephrasing means putting the statement in simpler words (sometimes by giving a concrete example, see 23). Rephrasing is symbolised here as REPHR. It is introduced by expressions like *that is*, *that is to say*, *i.e.*, *in other words*. Example: *The cat is a solitary animal, that is, it keeps to itself and does not seem to depend on others.* Now complete the following as indicated by the symbol using a clause or a sentence with an appropriate expression where needed.

22a. *LIMITATION*

1. Historical grammar can be very boring LIM.
2. Historical grammar can be very interesting LIM.

3. Holidays give us an opportunity to relax LIM.
4. The language laboratory is very useful in language teaching LIM.
5. On the whole tall people are not aggressive LIM.
6. The existence of ghosts is unlikely LIM.
7. *Winnie-the-Pooh* is basically a book for children LIM.
8. The English, Scots, Welsh and Ulster Irish live together as one nation LIM.
9. Good teachers are born not made LIM.
10. The contribution of linguistics to language teaching is undeniable LIM.

22b. *REPHRASING.*

1. Hasty generalisations are always dangerous REPHR.
2. Travel broadens the mind REPHR.
3. A test is not a means of torture REPHR.
4. The length of your M.A. dissertation should vary according to topic REPHR.
5. The conclusion to an essay may be a summary REPHR.
6. Knowing the grammar of English is not the same as knowing English REPHR.
7. When in Rome do as the Romans do REPHR.
8. We learn by making mistakes REPHR.
9. Learning is basically a question of motivation REPHR.
10. Witkacy was too far ahead of his times REPHR.

22c. *GENERALISATIONS for limitation or rephrasing.*

1. GEN. Yet Canadians are closer in their way of life to their southern neighbours in the U.S.A.
2. GEN. although his paintings are sometimes difficult to interpret.
3. GEN. All the same, he could depict the more amusing side of life when he wanted to.
4. GEN. After five years of married life, however, he may not be the same.
5. GEN. They are, however, far from the reality of life in the Wild West.
6. GEN, i.e., it is not a real sound but a family name for a group of sounds.
7. GEN. That is to say, they find foreign food and foreign customs seldom to their liking.
8. GEN. In other words, she does not exercise any real political power. This is in the hands of her ministers led by the Prime Minister.
9. GEN. i.e., everything that seems on the surface to be of value is not necessarily so.
10. GEN, that is, they always welcome foreigners and treat them well.

22d. *Rephrasing, Generalisation and Limitation.*

1. Faulty intonation can sometimes cause offence REPHR.
2. GEN. but it is a frightening way to travel!
3. Geographically speaking, Australia is enormous LIM.
4. At school I swore I would never become a teacher LIM.
5. GEN. but the ending was rather an anti-climax.
6. GEN. but underneath they loved each other passionately.
7. Love is akin to hate REPHR.
8. GEN. but he always seemed to pass his exams with flying colours.
9. Lack of sleep and irregular eating habits can spell doom for a student REPHR.
10. Tragic heroes always have one fatal flaw in their character REPHR.
11. Doctors will tell you to give up smoking LIM.
12. We were given an enormous reading list to get through LIM.
13. Very few people actually speak R.P. LIM.
14. GEN. but some people think that government money should be spend on improving life on earth.
15. GEN. However, there are many other writers who are equally worth reading.

23. *FREE CHOICE SENTENCE BLANK FILLERS.*

INSTRUCTIONS: As for 5. Include the vocabulary given in parentheses.

Last night I had the fright of my life. .... I spent most of the evening at Mike Henson's house watching TV with the family. .. (thriller) .. As a result I was fairly jittery already when I left the house. .. (eventually) .. It was pitch black. .. (moon) .. The streetlights in Church Rd. had gone out at midnight. .. (however) .. I have lived here for ten years or more. .... I knew that I had parked it by the third tree on the left. .. (groped for) .. When I came across the second tree I suddenly became aware of the graveyard on my left. .. (reminded) .. I almost felt as though I myself had become a participant in a horror film. .... There was total silence everywhere. .. (my footsteps, echo) .. I continued to grope around in the dark. Where was that scooter of mine? .. (nervous) .. My imagination began to work overtime. .... Most of the town had been asleep for ages. .... I cried out in pain. .... I picked it up and tried to start it. .... I tried again. .... I cursed it under my breath. .... As the engine roared into life, the scooter's headlight came on like a stage spotlight. .... He was nearer enough to touch. .... I backed the scooter away from him and left the graveyard like a bat out of hell. .... When I eventually got home I rushed to the drinks cupboard and board myself a stiff whisky. .... It was a long time before I got to bed. ....

24. *FREE CHOICE SENTENCE BLANK FILLERS.*

INSTRUCTIONS: As for 5.

I am not the sort of person who believes in ghosts. .... However, I have a friend who constantly experiences things which could hardly be called normal. .... So he was someone who would not invent stories to impress people. ....

One day I went to visit him in his Edinburgh flat. I opened the door I got a shock. ..... I said that I would come back later. However, he insisted that I come in. .... When I asked him to tell me exactly what had happened, he gave me the following account. He had had a lot of work to do the day before and so he went to bed early with the intention of reading. .... Then he got into his bed, adjusted the bedside lamp and began to read. .... It was rather difficult to concentrate but he was determined to stay awake as long as possible. ..... In a few moments he was fast asleep. .... It pressed against his head and did not allow him to drop off into a really deep sleep. .... At first he was reluctant to open his eyes. .... Finally he told himself that the best thing would be to remove the offending object, put it on the table and switch off the lamp. .... This meant that he had to turn round to switch it off. .... His blood ran cold. .... She was thin, of medium height and seemed to be staring at a spot behind him .. right through him. .... He judged them to be in the style of the late thirties. .... She was nowhere to be seen. Considerably shaken, he made his way to the kitchen to make himself something to drink. He avoided the spot where the apparition had been standing. .... I told my friend that it must have been some kind of dream. He did not deny this. The same idea had occurred to him. .... But he had checked his door and found that it had been locked all the time.

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